May 1959

The Office

Magazine of Management · Equipment · Methods

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Stop Watch Standards

Production Control

Power in Policy

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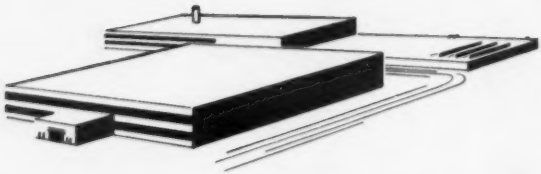

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The Office
Magazine of Management · Equipment · Methods

MAY, 1959
VOL. 49, NO. 5

A Cost-Cutting Short-Cut to Terminal Digit Shelf Filing 14
Many would like to take advantage of the savings offered by terminal digit indexing and shelf filing—if the conversion could be accomplished efficiently. Here's how to do it. H. O. BROCKMAN

A System for Reimbursing Your Traveling Salesmen 26
This method saves your salesmen's time and prevents their expense checks from overloading your accounting department.

A Pattern Punched Card System for Data Retrieval 79
Pattern punching allows many coded items to appear in the same field on a punched card and provides for faster machine sorting of cards. This means new applications for punched card systems.
F. E. LYNCH & JOHN F. GLENN

Setting Office Standards by Stop Watch Time Studies 87
Widely used for factory time studies, the stop watch is less often employed by office analysts. The authors tell how to overcome the objections to watches and how to set office standards.
C. J. BERG JR. & E. V. GRILLO

Annual NOMA Conference 92

Putting Power in Policy 94
Policy can be a powerful factor when it is clearly stated, effectively and consistently administered. LESLIE H. MATTHIES

Use "Word Magic" in Your Personnel Relations 103
It requires no more effort to use the right word at the right time, but it can make your work easier by building a spirit of cooperation among your fellow workers. JACK BEDFORD

Determining the Authority and Scope of Systems Personnel 108
In practice, many factors are of greater value to management than any indirect authority it may give its systems staff. NEIL POLLOCK

Computer Production Control 126
How a large British manufacturer of punched card equipment and electronic computers uses its own equipment to control its factory production, saving both time and money. JOHN GRINDROD

RCA's 501 Computer System 138

One-Writing Duplicator System Speeds Order Filling and Invoicing 158
Stocking almost 40,000 items and processing 200 orders daily this firm has increased the speed and accuracy of its order handling and invoicing.

THE OFFICE Product Index 9
New Books 39
Camera! 57
Right or Wrong in Employee Relations 119
Automatic Systems 125
New Products 174
Literature from the Manufacturers .. 249
News of the Office 262
News of the Industry 272
National Conference & Exhibit Calendar 289
As We See It 292

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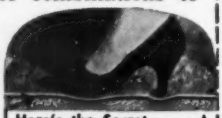

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ADVERTISING OFFICES:

New York: Office Publications, Inc., 232 Madison Ave., New York 16, N.Y. LExington 2-2245

Illinois & Wisconsin: Fred E. Zindler, 20 N. Wacker Drive, Chicago 6, Illinois. ANdover 3-2668

Ohio, Indiana, Michigan: Phelps Pratt, Orwell (Ashtabula County), Ohio. Orwell 265

California: Douglas C. Lance, 1948 Highland Oaks Drive, Arcadia, Calif. ELgin 5-6769

Direct inquiries from other areas to New York office.

★

Subscriptions: one year $3; two years $5 to U. S. & Possessions. Foreign: one year $4; two years $6. 35¢ a copy.

★

THE OFFICE is published the first of every month by Office Publications, Inc., 232 Madison Ave., New York 16, N. Y. LExington 2-2245. Cables: Wilhof, New York. Accepted as controlled circulation publication at East Stroudsburg, Pa. Printed in U.S.A.

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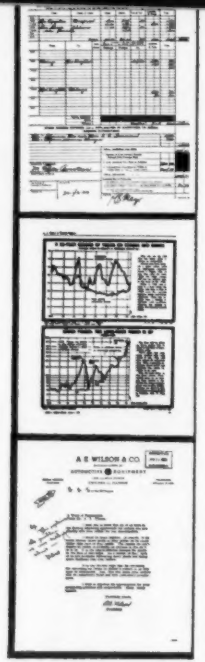

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The Office PRODUCT INDEX

This index, prepared for your convenience, lists the products and services advertised in this issue. Refer to pages listed for information on each. Further details can be had by writing manufacturer direct, or by use of reader inquiry card. **All numbers below refer to PAGES. Reader inquiry card numbers are at the bottom of individual advertisements.**

PRODUCT	PAGE
ACCOUNTING BOARDS	
Narco	241
ACCOUNTING MACHINES	
National	208
President	102
Torpedo	152
ACCOUNTING SUPPLIES	
Accountants' Supply House	261
ADDING MACHINES	
Regna	53
Totalia	71
Unistroke	74
ADDRESSING EQUIPMENT	
Master	202
Quik-Sorter	261
Rena	161
Scriptomatic	29
Speed-O-Print	288
Zip-O-Riter	266
BALLPENS	
All-Rite	146
Copy-Fax	121
Diplomat	37
Koh-I-Ball	269
Venus	189
BINDERS	
Cesco	164
Faultless	256
BINDING, PLASTIC	
Plastico	171
BOOK RACKS	
Rol-Rack	169
Stempco	50
BOOKS	
Office Reproduction Manual	270
BRIEF CASES	
Stebco	43
BUSINESS SHOW	
National	233
CALCULATORS	
Divisumma	112
Marchant	56
Monro-Matic	239
Plus Diehl	153
Plus-O-Matic	44
Victor	203
CALENDARS	
Ever Ready	222
CAMERAS	
Kenro	46
CARBON COPY SETS	
Copysette	183
Duplisette	266
Letterex	109
Rogersnap	224
CARBON PAPER	
Colonial	76
Electro-Write	259
Flagship	52
MultiKopy	110, 111
Rose	70
Roytronic	221
CARBON RIBBON ADAPTER	
Carbo-Rib	218
CASES, CARRYING	
Stebco	43
CASH REGISTER PARTS	
Cashere	285
CATALOGS	
Office Equipment	223
CHAIRS	
Clarin	191
Cole	139
Cramer	47
CHAIR MATS	
Floor Show	192
Prestige	243
CHECKWRITERS	
Nippo	285
CLOTHES RACKS	
Bevco	212
COIN CHANGERS	
MP-Jr.	40
COLLATING RACKS	
Evans	237
COLLATORS	
Accra-Feed	105
Collamatic	101
Col-A-Tron	280
Speed-Klect	165
Thomas	45, 207
COLUMNAR SHEETS	
National Manifolding	269
CONTROL BOARDS	
Boardmaster	223
Maggie Magnetic	250
COPYHOLDERS	
Rite-Line	287
Speedrite	278
COPYING MACHINES	
Contouramatic	167
Copycat	264
Copyflex	229
A. B. Dick	6, 7
Kenro	46
Nord	185
Ozalid	143
Photostat	251
Plenacopy	142
Stenafax	184
Thermo-Fax	118
Verifax	133
Xerox	154
CORNER ROUNDERS	
Lassco	39
COUNTER-IMPRINTER	
Tickometer	115
COUNTERS, TABULATING	
Denominator	199
DATA PROCESSING, Automatic	
Beemak	247
Flexowriter	124
Keysort	148
Mac Panel	2
Ormig	257
Punchwriter	234
Systematics	182
Teletype	263

PRODUCT	PAGE
DATING MACHINES	
ENM	277
Powermark	261
Roberts	227
DECIMAL CHART	
Alvin	287
DESK ACCESSORIES	
Ever Ready Calendars	222
Plastic Letter	218
Viso-Deskplate	283
DESKS	
Bentson	149
Cole	139
Rotor-File	145
DESK-SLIDE COVER	
Viso-Deskplate	283
DESK TRAYS	
Add-O-Mount	287
DICTATING MACHINES	
Coronet	1
Norelco	36
Scribe	77
SoundScriber	48, 49
Stenocord	135
Stenorette	205
DRAFTING EQUIPMENT	
Alvin	287
C-Thru	269
Grifhold	232
DUPLICATING SUPPLIES	
Allied	52
Colonial	76
Sta-Clean	70
Webster	110, 111
DUPLICATORS, SPIRIT	
Conqueror	219
Ditto	Inner Back Cover
Fordigraph	193
Golden Streak	69
Ormig	257
Starline	41
DUPLICATORS, STENCIL	
BDC Rex Rotary	173
Roneo	157
Speed-O-Matic	232
ELECTRIC MOTORS	
Lamb	282
ELECTRIC OVER-FLOOR CORDS	
Electriduct	266
ENVELOPES	
Columbian	213
Outlook	278
ERASERS	
EraserStik	220
Graypoint	195
EUROPEAN BUYERS	
Transeuropa	259
EXPENSE ACCOUNT SYSTEMS	
Common Sense	200
Traveletter	160
FACSIMILE MACHINES	
Stenafax	184
FILES	
Acme Visible	194
Atlas	246
Conserv-a-File	151
Convoy	280
Diebold	231
Liberty	226
Magazine	286
Magne-Dex	190
Mim-E-O	162
Nylo Glide	253
Pronto	155
Rol-Dex	214
Rotor-File	145
Scott-Rice	266
Spacefinder	211
Super-Filer	78
Verti-File	97, 98, 99, 100
Visirecord	141
FILING SUPPLIES	
Acco	72
Graffco	215
Hol-Dex	54
OPI Premier	254
Opnwindo Tabs	283
Pendaflex	242
Smead	172
FLOOR MATS	
Foot Comfort	4
FOLDING MACHINES	
Fold-O-Matic	252
Pitney-Bowes	18, 19
FORMS	
Baltimore	106
Clarkson	188
Continuous	283
International	271
Modern	217
National Manifolding	269
Readysets	287
Reynolds & Reynolds	30, 31
Rogersnap	224
Speediflo	116, 117
Spot-Carb	230
Star	236
Stevenson & Smith	212
FORMS HOLDERS	
Saunders	271
INK, FOUNTAIN PEN	
Skrip	245
INSERTING MACHINES	
Phillipsburg	95
Pitney Bowes	18, 19
KNIVES	
Grifhold	232
LABEL HOLDERS	
Hol-Dex	54
OPI Premier	254
LABELING MACHINES	
Cheshire	210
LADDERS	
Cotterman	232
LAYOUT SCALE MODELS	
Planomatic	246
LETTERHEAD PRINTING	
Dewberry	260
Hill	150
LIBRARY SHELVING	
Borroughs	67
MACHINE CONTROL PANELS	
Mec Panel	2
MACHINE STANDS	
Hercules	276
Luxco	244
Maso	273
Tiffany	55
MACHINE TIMERS	
TR-T	196
MACHINES, REBUILT	
International	277
MAIL CART	
Chesley	209
MAILING EQUIPMENT	
Cheshire	210
MAP FILES	
Confidential	266
MARGINAL PUNCHED CARDS	
E-Z Sort	268
Keysort	148
Stevenson & Smith	212
MICROFILM EQUIPMENT	
Ozalid	143
Photostat	251
Recordak	163
Thermo-Fax	35
NUMBERING MACHINES	
American	209
Columbia	158
EMN	277
Numbermatic	278
Powermark	261

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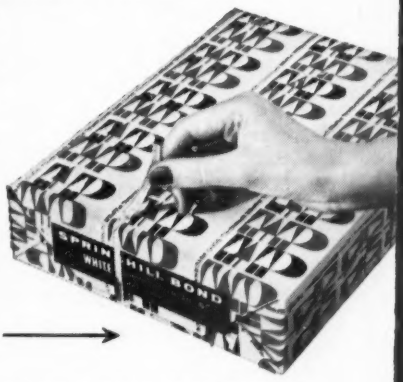

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PRODUCT	PAGE
OFFSET EQUIPMENT	
Atlas	246
Kenro	46
Miller-Trojan	243
Mim-E-O	162
Photostat	251
Rapid Printer	66
Stenafax	184
Xerox	154
OFFSET SUPPLIES	
Dav-A-Mat	51
Duplikator	13
Mercury	68
Repli-master	230
Speedy-Mat	220
PAPER CUTTERS	
Challenge	137
Kutrimmer	252
PAPER FASTENER	
Paper Welder	284
PAPER JOGGERS	
Syntron	216
PAPER HANDLING COMPOUND	
Sortkwik	166
PAPER SHREDDERS	
Shredmaster	168
Silver Executive	279
PAPERS, DUPLICATING	
Cooper's Cave Bond	123
Finch Bond	123
Hamilton	159
Mackinac	235
Nekoosa	21, 22, 23, 24, 25, 26, 27, 28
Springhill	11
Thor	225
PAPERS, LEDGER	
Nekoosa	25
PAPERS, LETTERHEAD	
Atlantic Bond	140
Cooper's Cave Bond	123
Finch Bond	123
Hamilton Bond	159
Mackinac Bond	235
Nekoosa Bond	21, 22, 23, 24, 25, 26, 27, 28
Springhill Bond	11
PAPERS, ONIONSKIN	
Nekoosa	27
PAPERS, TRANSLUCENT	
Nekoosa	26
Patapar	204
PARTITIONS	
H-O-N	42
PENCIL SHARPENERS, ELECTRIC	
Electro Pointer	274
PHOTOCOPIES	
Magi-Copy	284
PHOTOCOPY MACHINES (See Copying Machines)	
PLASTIC LAMINATION	
Plain-Vu	269
POSTAGE METERS	
Pitney-Bowes	187
POSTING EQUIPMENT	
Narco	241
P.E.C.-Matic	206
PUBLICATIONS	
Peter Basten	283
Systemation	232
RIBBON ATTACHMENT	
Dupli-Typer	200
RIBBONS, CARBON PAPER	
Arco-Lith	281
Columbia Mylar	144
Flagship	52
RIBBONS, INKED	
Allied	52
Silk Star	110, 111
RUBBER BANDS	
Plymouth	258
RUBBER CEMENT, DRY	
Dry-Stik	250
RUBBER STAMP PRESS	
Eva-Press	228
SAFES	
Meilink	276
Schwab	278
SORTING MACHINES	
Keytronic	8
SHELVING	
Borroughs	67
SIGNS	
Plastic Letter	218
SORTERS	
Sort-O-File	280
SOUND CONTROL	
Acoustinet	5
Acoustors	186
STAPLERS	
Swingline	65
STAPLERS, ELECTRIC	
Bates	73
Staplex	156
TAB CARD PRINTER-PUNCH	
Punchwriter	234
TABLE TOPS	
Johnson	255
TABULATING CARD HOLDERS	
Beemak	247
TAPES, MENDING	
Scotch Magic	240
TELEPHONE NOISE CONTROL	
Hush-A-Phone	285
TELETYPEWRITERS	
Teletype	263
TEMPORARY HELP	
Manpower	147
TIME RECORDERS	
Roberts	227
Tym-an-Dater	34
TYING MACHINES	
Bunn	197
Pak-Tyer	260
TYPE COMPOSING MACHINES	
Vari-Typer	201
TYPEWRITER JUSTIFIER	
Marginator	267
TYPEWRITER PARTS, TOOLS	
Carbo-Rib	218
Futuristic Platens	285
TYPEWRITER TYPE CLEANER	
Clar-O-Type	40
TYPEWRITERS, CHART-WRITING	
Siemag	38
TYPEWRITERS, ELECTRIC	
Facit	32
TYPEWRITERS, PORTABLE	
Cole	75
Olympia	170
Torpedo	152
TYPEWRITERS, STANDARD	
Facit	32
Olympia	170
Royal	Outer Back Cover
Secretarial	Inner Front Cover
Torpedo	152
Touch-Master	131
Visomatic	248
VISUAL AIDS	
Arlington	238
WASTEBASKETS	
Polly Flex	198
XEROGRAPHIC EQUIPMENT	
Kenro	46
Xerox	154

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Even blindfolded, you'll get *perfect results every time* if you follow label directions. Just rub new Harris 3-in-1 Solution on a new Duplikator, then wipe it off. Turn the plate over and repeat the process. In 60 seconds a perfect image on each side. Shadow areas stay open. Highlight dots print true. Contact your dealer for a demonstration.

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For More Information Circle No. 173

A Cost-Cutting Short-Cut to Terminal Digit Shelf Filing

H. O. BROCKMAN

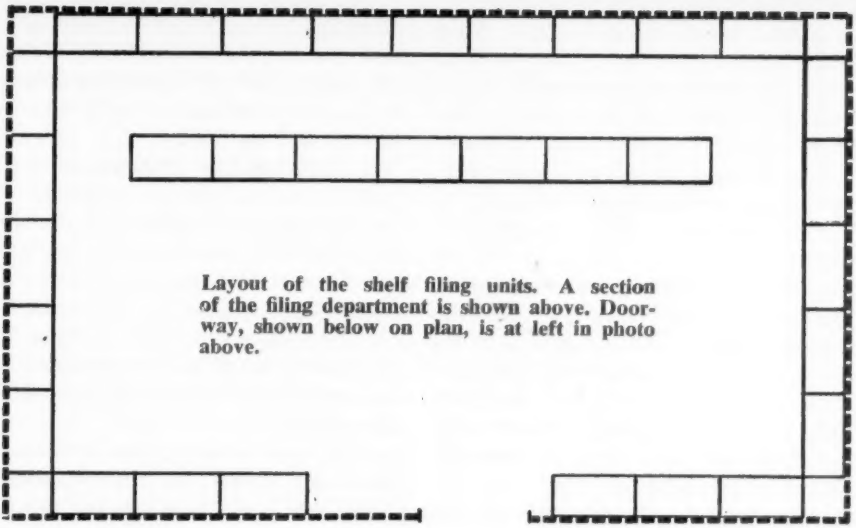
SHELF FILING is being studied by an increasing number of cost-concious office managers. Conversion from straight numerical filing to terminal digit filing is the subject of much research by filing supervisors harried by personnel shortages and worker complaints. Studies show a reduction of 40 - 50% in floorspace requirements, a saving of 30 - 60% in cabinet costs and, even more important, a 20 - 30% saving in file operating costs. Research on terminal digit filing promises uniform distribution of the workload, better employee relationships, unlimited expansion facilities and a substantial reduction in misfiles.

The economies and efficiencies indicated by such study and research are sufficient to make many an executive concerned with filing problems look for a simple solution to the problem of converting theory to reality. Unfortunately the unremitting demands of day-to-day business operation preclude the Utopian solution of shutting down the filing department for a few weeks to complete the conversion. A plan is described below whereby a few hours of simple arithmetic were substituted for several thousand manhours of work originally estimated for the conversion.

This problem arose when the insurance company concerned decided to make this double conversion from straight numerical and cabinet filing to terminal digit and shelf filing. They had 65,000 folders with numbers from 1000 to 250,000 and filed consecutively. There were also approximately 280,000 items consisting of from one to ten sheets per item with all sheets pertaining to one item, or number, stapled together. These latter items were in two series: one series numbered from 1000 to 200,000, and the second series numbered from 100,000 to 250,000. The first series contained about 150,000 items and the second about 130,000 items. The items were not filed individually but were filed approximately 50 items per heavy folder. In all, about 345,000 separately numbered items were involved in the conversion.

Since items were of two different types, it was decided to handle the two types separately. The individually numbered folders were transferred first, and the single and stapled sheets in larger folders were then handled.

Terminal digit, or last number, filing may sound difficult in theory but it is extremely simple in operation. For purposes of illustration, let us assume a filing system of not over one million numbers, or not over six digits, the



Layout of the shelf filing units. A section of the filing department is shown above. Doorway, shown below on plan, is at left in photo above.

TRANSFER OF FOLDERS

TIME	FOLDER NUMBERS	ESTIMATED NUMBER OF FOLDERS	FOLDERS TRANSFERRED PER HOUR
8:00- 8:30	Instruction Period		
8:30- 9:30	1,000- 20,000	3,000	3,000
9:30-10:05	20,000- 40,000	3,000	5,000
10:05-10:30	Rest Period		
10:20-10:48	40,000- 60,000	5,000	12,000
10:48-11:14	60,000- 80,000	5,000	13,000
11:14-11:36	80,000-100,000	5,000	14,000
11:36-11:56	100,000-120,000	5,000	15,000
11:56-12:10	120,000-140,000	5,000	18,000
12:10-12:40	Lunch Period		
12:40- 1:25	140,000-160,000	6,000	8,000
1:25- 2:05	160,000-180,000	6,000	9,000
2:05- 2:40	180,000-200,000	6,000	10,000
2:40- 2:55	Rest Period		
2:55- 3:30	200,000-220,000	7,000	12,000
3:30- 4:10	220,000-250,000	9,000	14,000

The 65,000 folders were transferred by 14 people in eight hours. Note slowdown after lunch period.

highest number being 999,999. While there are several methods of handling this, the simplest would be to divide each number into two groups. For example, the number 186,210 would be broken into the terminal group 210 and the primary group 186.

With this system all folders numbered 1210, 98,210, 147,210 and 186,210 would all be filed in the same group and in that order since all of these numbers have the same terminal group, 210. Similarly all folders with the numbers 1743, 13,743, 121,743 and 942,-743 would all be grouped together and in that order since they all have the same last three digits.

The same distribution applies to all other numbers, so it can be readily seen that this method automatically divides the system into 1000 separate groups, each group ending in some number between 000 and 999.

To illustrate the advantages of terminal digit filing, assume 1000 different file drawers each labeled with a number. The first drawer would be 000; the second 001; the third 002; the fiftieth 049; the 615th, 614; and the last, 999. The system seems to be off by one drawer but this is because the first drawer is labeled zero (000) instead of one (001).

If we were handed a folder which had on it any number, for example, folder No. 246,823, and were told to file it by

TRANSFER OF SEPARATE ITEMS

ITEM NUMBERS	ESTIMATED NUMBER OF PIECES	ELAPSED TIME IN MINUTES	MINUTES PER 1,000 ITEMS
1,000- 20,000	4,000	56	14
20,000- 40,000	6,000	48	8
40,000- 60,000	6,000	36	6
60,000- 80,000	8,000	32	4
80,000-100,000	8,000	24	3
100,000-120,000	10,000	40	4
120,000-140,000	10,000	20	2
140,000-160,000	12,000	36	3
160,000-180,000	16,000	32	2
180,000-200,000	18,000	27	1½
200,000-220,000	20,000	35	1½
220,000-240,000	20,000	40	2
240,000-250,000	10,000	30	3

25 people sorted 150,000 items to the stacked boxes (see page 152) in 7½ hours. The items were transferred to the shelf files in another three hours. Note how persuasion by the supervisor increased production to 1½ minutes per thousand items.

the last three numbers, we would have no difficulty determining that it would go into drawer 823. If we were given folder No. 21,252, we would put it in drawer 252, and so on.

New numbers or folders are added to any file in consecutive order. Suppose we were to file a thousand new numbers, for example, 186,000 to 187,000. Filing these folders by the last three numbers, the first one (186,000) would go into drawer 000; the second folder (186,001) into drawer 001; No. 186,-250 into drawer 250; and so on up to 186,999 which would go into the last drawer labeled 999. Then the next folder produced, No. 187,000 would again go into the first drawer labeled 000 and the whole sequence would be repeated. It is evident that any consecutive 1000 numbers or folders introduced would be distributed one to a drawer throughout the entire 1000 drawers.

To put it another way, since the newest numbers in almost any company are the ones which are referred to most often, the work of filing and finding is automatically distributed throughout the entire bank of 1000 drawers. This is true regardless of whether the system is so large that 1000 six-drawer file cabinets are required, or whether the system consists of only a dozen tub files having in them 1000 guides labeled from 000 to 999. This uniform distribution of

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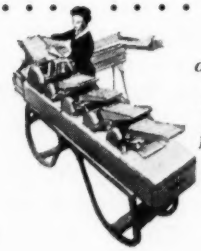

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For More Information Circle No. 271

the workload eliminates the congestion and excessive load that normally occurs at the top, or new, end of a straight numerical filing system.

The physical location of any folder in the terminal digit system is different from what it would be in a straight numeric system. To convert to a terminal digit system, every single item or folder has to be physically moved. It is this very troublesome and, in terms of manhours required, expensive physical transfer that will now be described.

If the final location of every folder could be predetermined before the transfer began, the operation of rough sorting (grouping together all folders with numbers ending in the three same final digits) would be eliminated. If we knew that all folders with numbers ending in 247 would fall in the middle of the fifth shelf of the 12th cabinet, we could simply transfer all folders ending in 247 to this location. If our estimates of the location of this number were correct, we would find, when we had transferred all the folders, that those ending in 247 would be exactly where they should be and would not have to be moved again.

This advance knowledge can be obtained in a few minutes by simple arithmetic. In the case illustrated, the items to be moved were originally housed in 68 four-drawer file cabinets. The contents of these cabinets were converted to filing feet, *i.e.*, the space required for a stack of folders 1 ft. high if the folders were laid on a desk. It was assumed that each filing cabinet drawer was 2 ft. long and therefore contained two filing feet. By simple multiplication, each cabinet of four drawers contained eight filing feet or the 68 cabinets contained 544 filing feet.

In the new shelf files, it was decided to allow for about a 25% expansion. Because the new shelf filing room would contain them efficiently, 31 shelf file cabinets with seven 3 ft. shelves each were purchased and installed. These totalled 651 filing feet (3 ft. per shelf times seven shelves per cabinet times 31 cabinets). Three shelves, or 9 ft., were reserved for a special pending file so that we had 642 filing feet in 214 shelves available.

For filing efficiency, it was decided to use 1000 shelf guides since this would give about four guides per shelf or about one guide every 9″. These 1000 guides were purchased complete with a shelf hook and preprinted vertically numbered inserts. This printing produced a guide with high legibility and eliminated the hand numbering of each guide.

The next step was to accurately locate each one of these guides in its exact final position in the 214 shelves. As there were to be 1000 guides distributed into 214 shelves there would be four guides in some shelves and five guides in others. By dividing 214 into 1000 we knew there would be 4.6729 guides on each shelf. Since only whole guides could be used, the first shelf would have four guides, the second would have five (the sum of 4.6729 and 4.6729 is 9.3458, indicating that the first two shelves would have nine guides). The principle was extended by successively adding 4.6729 to get 9.3458, 14.0187, 18.6916, and so on 214 times until we reached a total of

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1000. This arithmetic was done on an adding machine in about a half-hour.

```
                ¤
      36729
      46729

      83458
      46729

     130187
      46729

    9943277
      46729

    99900.06
    99900.06¤
```

The use of four decimal places was necessary to insure accurate placement of the guides. In actual practice, however, it was necessary to subtract 1 from the first shelf since the first guide was 000 and not 001. The actual sequence of subtotals on the adding machine tape was 3.6729, 8.3458, 13.-0187, 17.6916, etc. The tape was then taken to the empty files and used to locate the guides. Disregarding the decimals on the tape, we placed guides numbered 000 to 003 on the first shelf, guides 004 to 008 on the second shelf, guides 009 to 013 on the third shelf, guides 014 to 017 on the fourth shelf and so on through the entire 214 shelves; and found that, as calculated, the guide numbered 999 came near the end of the 214th shelf. We had accomplished one of our major objectives, the elimination of the rough sort. It was no longer necessary to sort all the material to be filed into groups ending in any one of the three digit number groups. Instead of sorting, the folders could be placed directly on the shelves

For More Information Circle No. 354

behind their proper guides.

One other major problem remained. Even though each group of folders ending in any three digits could be placed behind its proper guide, and we knew each group would be in its proper location, it was still necessary that the folders in each group be in proper sequence for easy accessibility. All the folders ending in the numbers 247 could be placed directly behind the guide numbered 247, but it was still necessary that they be in the proper sequence within the group. This sequence could not be 1247; 856,247; 311,247; 267,247; but 1247; 267,247; 311,247; 856,247.

It was originally intended to perform the rough sort automatically as outlined above in one day, then to fine sort each group on the shelves the following day. But a method was devised whereby the whole operation was performed in one day. The method was extremely simple but required close supervision and was essentially a "bucket brigade" operation.

Two men were assigned to transporting the full filing cabinet drawers to the shelf files. The drawers were placed on a long table so that about ten drawers were always available. These were delivered in consecutive numerical sequence starting with the lowest number, in this case 1000. One girl, the most competent available, was assigned to removing the folders from the drawers and handing them to one of ten girls who actually placed them on the shelves.

The ten girls who placed the folders on the shelves were each assigned to

For More Information Circle No. 472

100 of the 1000 guides and each was instructed to work only her own 100 numbers. The girls formed a line starting with the girl assigned to guides 000 to 099 and ending with the girl assigned to guides 900 to 999. As these girls walked past the table on which were the drawers of file folders to be transferred, each girl was given folders covering 100 numbers, although not actually 100 folders, since for one reason or another only about one fourth of the numbers actually were out of file and in use. The first girl, therefore, received folders 1000 to 1099, the second girl had 1100 to 1199, the third had 1200 to 1299, etc. The girls placed each folder behind its similarly numbered guide. When the first girl, had placed her folders (000-099) behind the proper guides, she returned to the table and received her next 100 numbers which were 2000 to 2099; the second girl got folders 2100 to 2199, etc.

Each girl was thoroughly instructed to place each folder behind any folders already present behind any guide. This sequence was maintained throughout the entire transfer until all folders were behind their proper guides.

Since all the girls could work no faster than the pace set by the slowest girl, another girl was introduced to considerably increase the transfer speed. The extra girl, known as a floater, circulated among the ten transfer girls and took, from any girl who seemed to be slowing up the rest, those folders which she had left. This permitted the slow girl to immediately regain her place in the line and cause the pace of the entire line to accelerate.

For More Information Circle No. 473

When the operation was completed we had accomplished our objective of transferring from file cabinet drawers to shelf files and from consecutive numeric filing to terminal digit filing in a single handling. Both the rough sort and the fine sort of 65,000 file folders was accomplished in less than eight hours. Fourteen workers were involved and total manhours required were 112, against an initial estimate of over 1200.

Then we were ready to proceed with the transfer of the 280,000 separate items. As described earlier, these ranged from single numbered sheets to as many as ten stapled sheets under one number. All items were contained in heavy (16-pt.) kraft folders with about 50 numbers per folder.

Since there were, on the average, so few sheets per number, the use of individual folders for each number was not warranted. It was decided to retain the old method and place 550 numbers in each heavy folder which was preprinted with appropriately numbered tabs. Since these items were to be converted to terminal digit sequence, it was necessary to remove all items from their original folders, rearrange them in terminal digit sequence and place them in the new folders before transferring them to the shelf files. It was evident that this was going to be a problem of considerable magnitude.

Our first thought was to follow the pattern used previously, *i.e.*, put the empty new folders directly in the appropriate location in the shelf files and then place each item in its proper folder.

(Continued on page 149)

For More Information Circle No. 370

A System for Reimbursing

HOW CAN SALESMEN be reimbused for expenses with fewer headaches for the accounting department, the sales manager, and the salesman, and with palpable savings for the company? An increasing number of concerns—from giant corporations to one-man operations—are turning to a system originated over half a century ago. Started in 1894 by the late Edgar A. Walz, the system is today international in scope and unique in its service, the patented property of Traveletter Corp., Greenwich, Conn.

A credential, known as a Traveletter, is issued to company travelers (executives, salesmen, etc.) to enable them to cash drafts (Travelorders) on their company at any of over 5000 hotel and motel correspondents throughout the U.S. These drafts can also be cashed in many foreign countries and are honored by Trans World Airlines.

Controllers and treasurers find that this system improves their control of expense reports; brings these reports in more promptly; permits more exact auditing; eliminates expense checks; reduces cash advances; and simplifies bank relations. Sales managers like the idea because it offers them better control over their salesmen's expenses; ends

For More Information Circle No. 353

Your Traveling Salesmen

the need to rush check approval; improves salesmen's morale; gets rid of costly delays; and affords salesmen more actual selling time.

Salesmen themselves report that possession of this credential assures more rapid reimbursement; avoids embarrassing delays; gives added prestige; and allows them to alter their itinerary without worrying about missing that all-important expense check.

The system works this way. Each traveler is issued a credential signed by Traveletter's chief executive. This permits the holder to cash drafts on his own company *up to a specified amount* at any hotel or motel listed in the *Traveletter Guide,* published annually (as correspondents are selected on a basis of their standard of service, the guide also serves as a general compendium of good stopping places). The credential bears the signature of the traveler and the name of the bank to which it should be presented.

A sheet with space for correspondents to fill in date, amount, hotel and location is attached to the credential. By checking the latest endorsement and the specified weekly limit, correspondents are sure to observe the stipulation limiting the amount to be drawn within

For More Information Circle No. 319

a calendar week. While it is generally desirable that travelers be required to draw a draft for the exact amount of their expenses for the week, the system provides for instances where allowable expenses are particularly high one week. The traveler draws the draft for the maximum specified on his credential. On the back of the draft, in a space provided for such a contingency, he indicates his total actual expenses. The deficiency is then added to his next week's draft. However, if his expenses often exceed his limit, the company can easily arrange to increase it.

Users receive, attached to the drafts, expense blanks covering a week's expenses. These are detached and are mailed to the holder's home office. Some companies do not use this standard form, but supply their own design. The Travelorder drafts are also available in the form of tabulating cards, and can be machine-processed along with other company records.

A fairly recent and increasingly popular innovation is a draft in the form of an envelope (see page 37). This enables the holder to include a detailed report of his expenses with the draft itself. While, this idea is popular with many companies, some prefer the older method of returning expense reports independently because, in the words of one sales manager, "We like to see these reports before the accounting people get hold of them."

Cost of the service is computed on an annual basis as 13% of the weekly limitation for each Traveletter holder. This cost is more than offset through savings in stationery, postage, time and,

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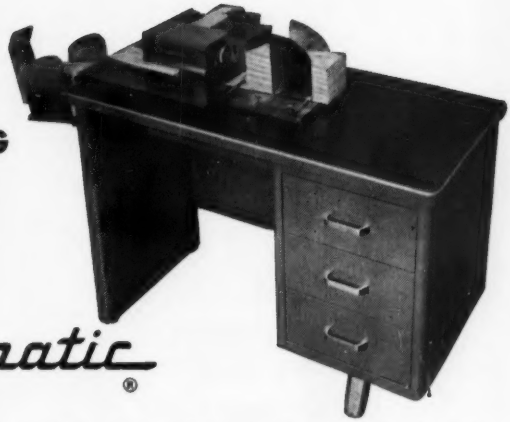

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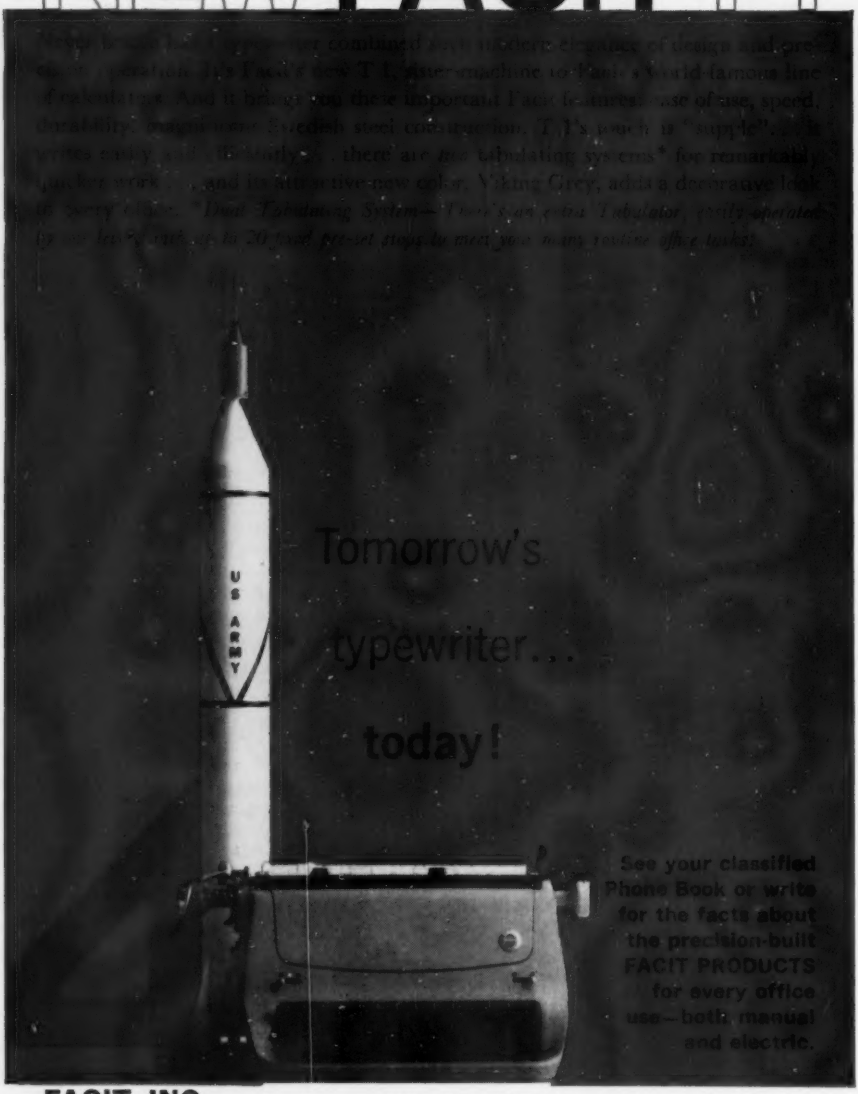

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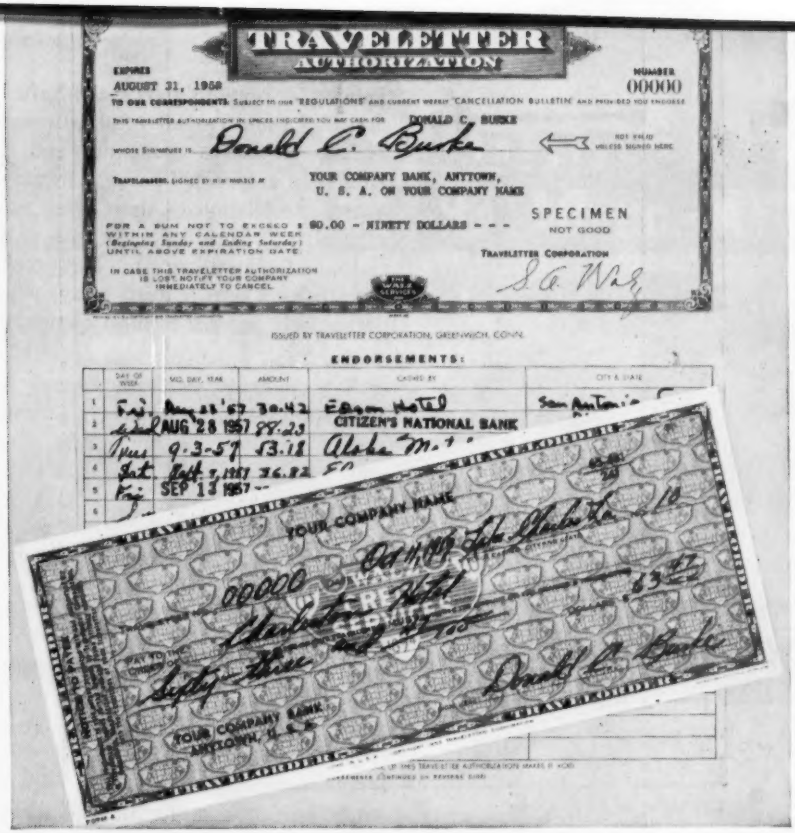

A typical Traveletter with attached sheet for correspondents to fill in date, amount, hotel, etc. In foreground is the Traveloder draft, which traveler fills out like a check.

most important, labor. Moreover, this is accomplished with a tool that provides more accurate and more easily checked expense accounts.

Drafts are printed on safety paper, the typewritten portions being filled in with special type to make alterations impossible. Correspondents are carefully chosen and are thoroughly familiar with the system's procedures and regulations. They like the system because it relieves them from the rather onerous business of cashing checks.

If a credential is stolen or lost, or if for any reason it is revoked but not surrendered by the holder, the Traveletter Corp. must be notified without delay. It then publishes a notice of cancellation in a bulletin sent weekly to all of its correspondents.

Should any draft obviously be improper—for example, a draft cashed after the holder's credential has been cancelled and notice of cancellation has appeared in the bulletin—it may be returned *unpaid*. The matter is adjusted between the Traveletter people and their correspondents. The company's

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liability is only to pay such drafts as are drawn and cashed within the *limits* of the respective credential and not later than a specified period after it requests cancellation (a short delay being necessary to permit receipt and publication of cancellation). This makes Traveletter Corp. a third party, which particularly appeals to most companies.

The bank procedure can be tailored to fit a company's individual needs and payment effected through any of a number of alternate methods. The drafts may be charged to a special bank account against which only such are charged, or they may be charged against the company's regular account. The bank may be instructed to submit drafts for approval before payment, or to pay them on presentation without further approval, as with checks. In the latter case the bank will probably ask for an appropriate resolution, which Traveletter Corp. provides in flexible form. Whichever procedure is used depends on the particular circumstances, the nature of the personnel involved, and the relationship between a company and its bank.

Sometimes the criticism is advanced that this system gives the credential holder too much leeway in reimbursing himself for his expenses prior to their approval. But most companies have not found this to be so. If travelers are properly instructed on the limits of allowable expenses, companies are able to reduce the funds that must be advanced to salesmen and others and, moreover, capital is freed that would otherwise be unproductive. As one executive put it, "We do not feel that we are giving more responsibility or

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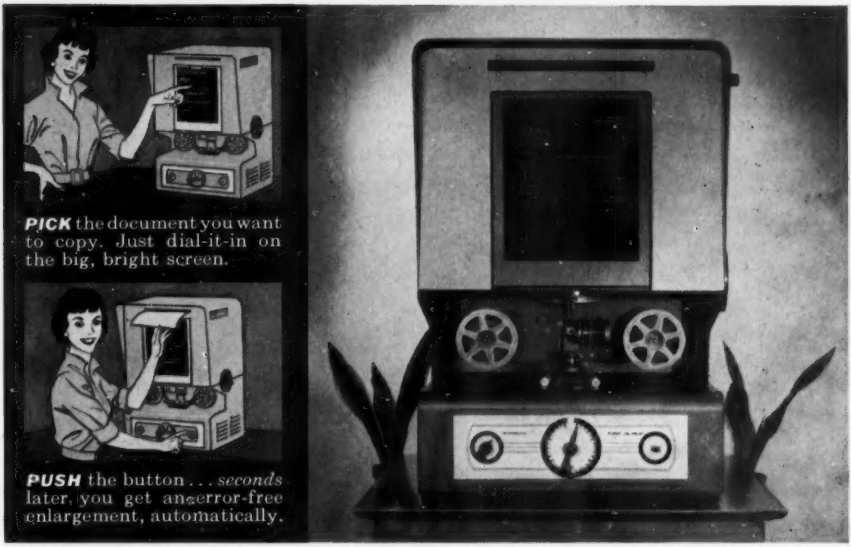

With a reader alone your microfilm system works at only half efficiency. Yet, for little more cost, you can combine a superior reader with an automatic printer! With the "Thermo-Fax" Microfilm Reader-Printer you make an error-free copy of any microfilmed document in seconds . . . whether you file on reels, cards or jackets, on 35 or 16mm film. All copies are on sturdy, work-size paper! For full facts about the "Thermo-Fax" Microfilm Reader-Printer send the coupon.

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For More Information Circle No. 317

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50% SIMPLER

Comparison-shop the dictating machine market... you'll discover that no other machine offers so many time-saving money-saving features...at such a modest price!

• Magazine Loading • Five Simple Controls • Extra-long Dictating Capacity • Easy Portability • True Fidelity Sound • Re-Usable Magnetic Tape • Automatic Counter • Modern Decorator Styling • **only 179.50** (plus tax) complete with loaded magazine, log pad and dust cover, plus choice of (A) microphone speaker, or (B) stethoscope headset with foot control, or (C) stethoscope headset with typewriter control (latter at slight additional cost).

WITH THE MAGAZINE LOADING

Norelco® '35'

DICTATING/ TRANSCRIBING MACHINE

Here is a new concept in dictating/transcribing machines... engineered and guild-crafted by the company that makes world famous NORELCO Hi-Fi Components, and Electric Shavers. Five simple controls operate all dictating and transcribing functions! Tape magazine permits easy, fumble-proof loading! New, better sound assures clear voice reproduction to speed typing and prevent fatigue!

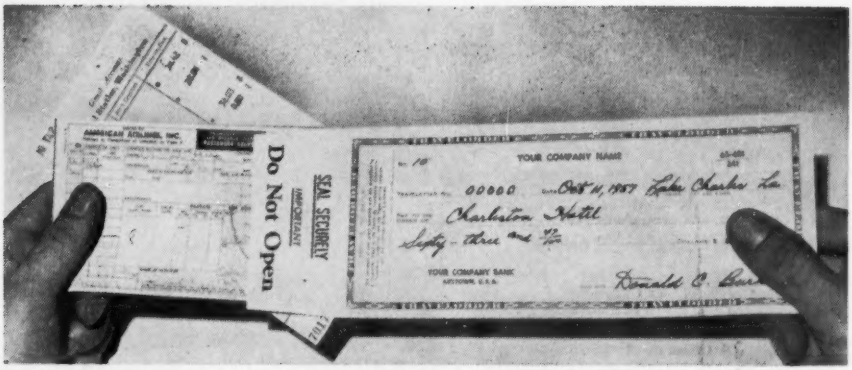
The Norelco 35's compact size, light weight and 35 minute dictating capacity make it ideal for dictation at home, in your car... or for recording important on-the-spot information in the field!

Try the Norelco '35' in your own office and discover how much time and effort it can save you in the preparation of records, correspondence, reports, or other business paperwork. For a free demonstration, without any obligations, write directly to the factory for the name of the Norelco '35' dealer nearest you.

NORTH AMERICAN PHILIPS CO., INC.,
Dictating Equipment Division, 230 Duffy Ave., Hicksville, L. I., N. Y.
In Canada, the Norelco '35' is known as the 'Philips' dictating machine and is distributed by Philips Industries, Ltd., 116 Vanderhoof Ave., Toronto, Ont.

NORELCO

For More Information Circle No. 376



An increasingly popular innovation is this draft in the form of an envelope. It enables the holder to include a detailed report of expenses with the draft itself.

freedom to our salesmen, who are our ambassadors to our customers, than is given in ordinary routine to other, and often lesser, employees such as those in charge of purchasing or inventories or, for that matter, of postage stamps."

Information on the system and an illustrated brochure with samples and names of companies using it can be obtained without obligation from Traveletter Corp., 135 E. Putnam Ave., Greenwich 3, Conn., or Circle No. 145.

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...with a one-piece cast-iron frame!

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SIEMAG

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THE SIEMAG DE LUXE typewriter is constructed on a one-piece cast-iron frame which eliminates vibration and distortion even under adverse conditions such as use on planes, trains, and ships.

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Special models for *the blind typist* (not a Braille machine) and *the one-armed typist.*

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OFFICE CLERICAL PRODUCTIVITY STANDARDS. Chicago Chapter, Systems & Procedures Assn., H. H. Volkmar, Lock Box H, Chicago 90, 54 pp., $5.

Here's data which office executives often seek but seldom find. The figures cover the experience of some 45 well known firms in various businesses. Operations include stapling, folding, inserting, counting, comparing, inspecting, checking figures, sorting, filing, collating, decollating, posting; and the use of such machines as adders, checkwriters, offset duplicators, key punches and other tabulating card machines.

WIN PLACE AND SHOW: EFFECTIVE BUSINESS EXHIBITING by Rudolph Lang. Oceana Publications, Inc., 80 Fourth Ave., New York 3, 204 pp., $7.50.

Answers many basic questions of management, sales and advertising executives about the planning of business shows. The author delves into his own long history of directing successful trade shows to describe the major do's and don'ts of good showroomship. His book provides a guide to effective planning, coordination, staffing, publicity and evaluation of exhibits, and covers those points most frequently raised by management. Illustrated with 22 amusing drawings by David Maxwell.

THE LANGUAGE AND SYMBOLOGY OF DIGITAL COMPUTER SYSTEMS. Government Service Dept., Bldg. 210, RCA Service Co., Camden 8, N. J., 114 pp., $2.

Prepared for the Air Force Cambridge Research Center as a reference in interpreting logic diagrams and technical descriptions, this book explains many of the basic characteristics of computers. It dis-

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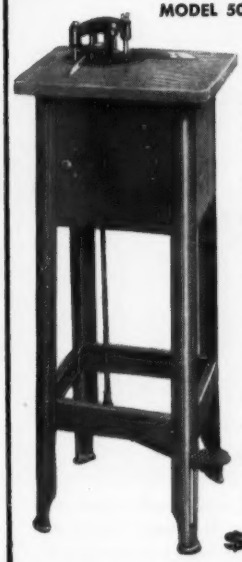

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For More Information Circle No. 471

cusses Boolean algebra in practical terms, and there is a cross reference of logic diagrams and symbols used by various computer manufacturers and a dictionary of computer terminology.

THE PROS AND CONS OF EQUIPMENT LEASING FOR SMALLER MANUFACTURERS, DEPARTMENT STORES, AND SUPERMARKETS. Foundation for Management Research, 121 W. Adams St., Chicago 3, 16 pp., Free.

Discusses cost of leasing compared with outright purchase, and purchase through conditional sales contract. Cost charts illustrate the text. Advantages and disadvantages of equipment leasing in specific business situations encountered by smaller enterprises are set out in detail.

HOW TO TAKE A CASE BEFORE THE NATIONAL LABOR RELATIONS BOARD by Louis G. Silverberg. Bureau of National Affairs, Inc., 1231 24th St., N.W., Washington 7, D. C., 386 pp., $7.85.

This completely revised and rewritten edition explains the jurisdiction and machinery of the NLRB; tells how and why an election is conducted, how to remedy unfair labor practices; shows where to appeal and how to petition; details what the Board looks for in investigations. Employers, union officials, labor lawyers, and anyone else who has contact with the Board will find this guide a useful reference.

HINTS ON BETTER LETTERS by John D. Yeck. Y&Y Publishing, 349 W. First St., Dayton 2, Ohio, 48 pp., 10c.

Pocket-sized booklet containing 48 brief suggestions for improving business letters.

DIRECTORY OF MANUFACTURERS & PRODUCTS OF THE MECHANICAL HANDWRITING INSTRUMENT INDUSTRY. Fountain Pen & Mechanical Pencil Manufacturers' Assn., 1426 G St., N.W., Washington 5, D. C., 32 pp., $2.50.

This directory, revised Jan. 1959, lists the names of all manufacturers in the mechanical handwriting field.

Cleans type CLEANER! Handy dauber whisks away dirt and goo in seconds! Non-inflammable, absolutely safe; slow-evaporating, hence economical. Look for the smart new orange-and-blue carton on your dealer's shelves.

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in choice of 4 decorator colors: Tan, blue, green, and silver-grey.

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Write for descriptive catalogue and nearest dealer

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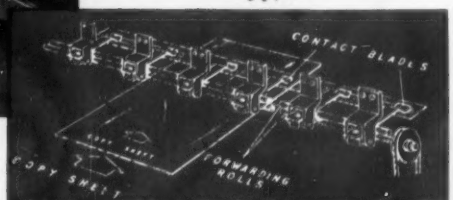
THE ROCKET Starline SERIES

Standard — THE CROWNING ACHIEVEMENT IN FLUID DUPLICATING



This dependable mechanism is sensationally efficient. Continuous action Forwarding Rolls instantly advance paper to Registration Rolls (not shown). As paper passes Contact Blades, it interrupts current, starts Registration Rolls, then Duplicator Drum in a timed sequence. Even the smallest practical size form sets duplicator in motion

Operator skill in fast, accurate hand feeding of forms is made unnecessary by this Electronic Feed Duplicator. This skill has been built into the machine itself. It is almost unbelievable, yet a mere sheet of paper, advanced casually or even carelessly, will activate the duplicator for perfect copies in precise registration. Electronic Feed actually corrects operator errors in feeding. So fast is its action, a speed of 100 copies or more per minute in exact registration can be attained, even by an inexperienced operator. Model E14E-P above, revolves, lets you choose the operating position you prefer, front feed, side feed, etc. Write for free brochure.

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THIS IS THE SECRET TO LOW-COST INSTALLATION

A PRACTICAL ANSWER TO INCREASED OFFICE EFFICIENCY

SAVINGS UP TO 50%! The cost is less than other methods—even less than a do-it-yourself project. Durably constructed of tempered hard board and select kiln-dried lumber. This material has sound absorption qualities, reduces noise.

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CHOICE OF COLORS! Nine different finishes; or a prime coat. Top panels can be clear glass; translucent glass; peg board; or open. Neat, handsome appearance in all respects.

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Stebco

"FLAT-TOP"

CATALOG and SALES CASE

in **Tufide**

LOOKS like leather **FEELS** like leather...

OUTWEARS leather 5 to 1...

UNCONDITIONALLY Guaranteed 5 years!

Another sure way to beat the profit squeeze . . . you get **maximum** capacity at a **minimum** cost in this Stebco TUFIDE "Flat-Top" Catalog and Sales Case. You get modern box type construction and two expanding pockets, for full view and easy access to contents. Built to last 'til **1970** or longer . . . thanks to Stebco's patented features, such as **Safe-T-Edge** guaranteed not to break; holds case in perfect shape. See and compare the TUFIDE "Flat-Top" Catalog and Sales Case at Office Supply, Luggage and Department Stores.

Also custom built with inside changes to meet your special needs. Write for details and new '59 Catalog.

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Since 1918

For More Information Circle No. 249

WHY USE TWO

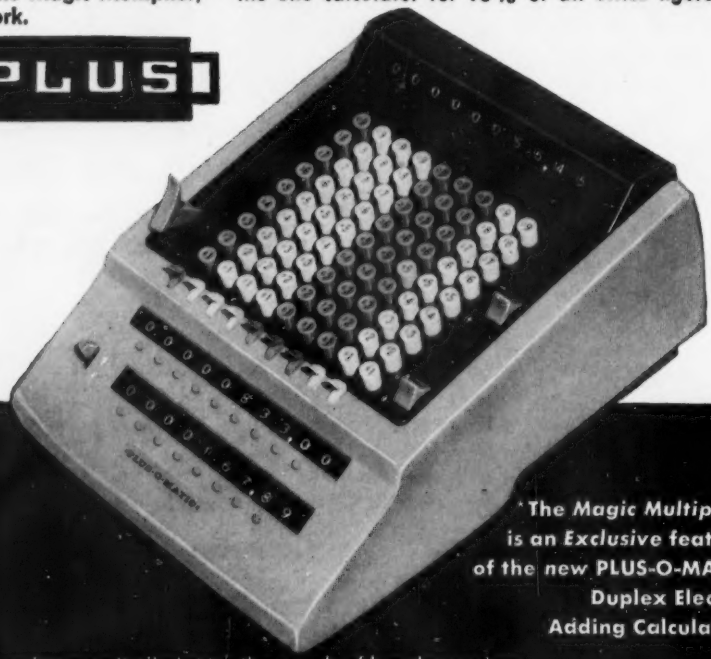
WHEN ONE

WILL DO?

Why use separate adding and calculating machines when *now*, you can do *all* your addition, subtraction and multiplication on one?

It's the *all-new* PLUS-O-MATIC Duplex Electric Adding Calculator, with "The Magic Multiplier,"* the *one* calculator for 95% of all office figure work.

PLUS



*The *Magic Multiplier* is an *Exclusive* feature of the new PLUS-O-MATIC Duplex Electric Adding Calculator.

Faster because it eliminates thousands of key depressions.
More Accurate because all work-results are constantly in view.
Easy to Operate because it's so simple. Anyone can use Plus-O-Matic.
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PLUS Computing Machines Division

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Representatives in Principal Cities

For More Information Circle No. 252

"a new Thomas Collator sure solved a lot of problems around here"

It's my job to look for trouble—preferably before it starts—but one job that always caused me plenty of headaches was this business of gathering duplicated pages into sets. It's always the same—too little time—not enough help—and plenty of grumbling by the girls.

It wasn't until I had talked to the Thomas people that I realized our present method was as obsolete as the roll top desk. With our new Thomas Collator *one girl does the work of six* . . . without the mad scramble of last minute deadlines. What's more, the way it looks, the machine will pay for itself by the end of the year.

Why not call the Thomas people for more information or an actual working demonstration? If you're like us, you'll be glad you did!

Thomas Collators Inc.

100 Church St., Dept. B, N. Y., N. Y.

For More Information Circle No. 310

Ask your dealer to demonstrate the Kenro "vertical 18" camera—he can show you how to save money!

this versatile camera will do all this . . .

MAKE LINE AND HALFTONE NEGATIVES—up to 14" x 18". Enlarges to 3X, reduces to ½ size with standard Goerz lens. Uses counters and micro dials for precise focusing and sizing. Exposure controlled by automatic reset timer.

MAKE ONE SHOT, RIGHT READING PHOTOCOPIES—new Prismatic Head eliminates need for a negative intermediate. Gives black on white or white on black reproduction of type, drawings, layouts, photographs, enlarged up to 4X, reduced to ½ size. Makes screened type in one shot.

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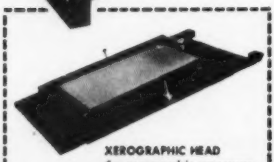
The Kenro "Vertical 18" Camera is compact, precise, easy to operate. Standard model comes complete with Goerz lens, lights and film head, ready for use inside or outside the darkroom. Available through leading graphic arts and office equipment dealers.

Write for literature and name of nearest demonstrator dealer.



XEROGRAPHIC HEAD
for xerographic exposures

PRISMATIC HEAD
for one shot, right reading photocopies

KENRO GRAPHICS, INC. 25 Commerce St., Dept. F-5 Chatham, N.J.

For More Information Circle No. 311

Would You Put a Size 12 Secretary in a Size 9 Dress?

She'd look terrible—feel worse! And chances are she couldn't put out a good day's work. The same goes for a miss in a misfit chair! That's why she belongs in a Cramer Secretarial Posture Chair, the chair that was made for her.

Cramer Chairs adjust to the individual with simple finger-tip controls. Perfect seat height and depth, proper backrest position will fit and sit her right. She'll feel the difference because she is "Backed by the Best."

- Replaceable Seat and Back Covers
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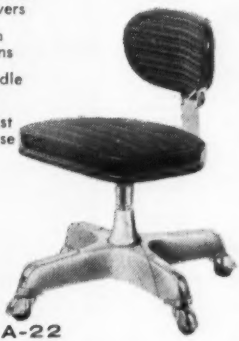

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OR WRITE FOR COMPLETE DETAILS

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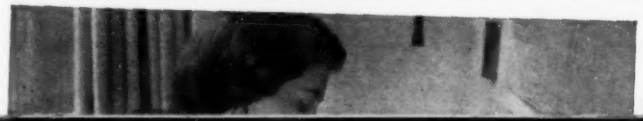
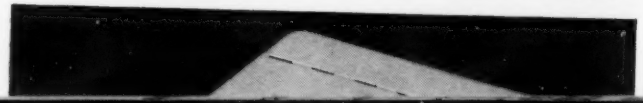
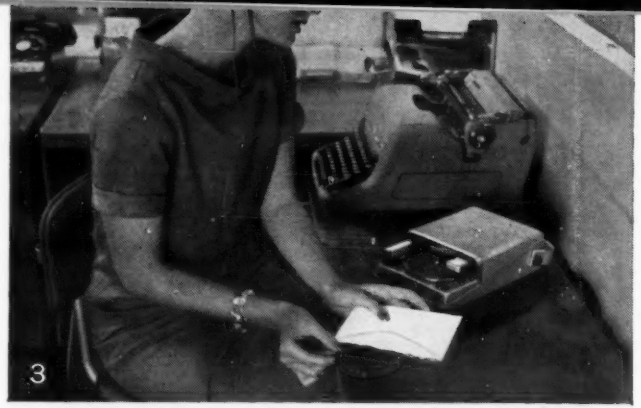
transistorized compactness... flashlight battery economy

IT'S A PORTABLE. Weighs only 6 pounds! Needs no carrying case. Slips easily into briefcase or bag. Lets you dictate on-the-spot . . . on-the-go . . . anywhere.

IT'S AN OFFICE MACHINE. Use it in a drawer to save desk top space. Gives big machine performance—and it's portable—one machine can serve several people.







IT'S A TRANSCRIBER. Just plug in listening device and foot control. Transcription is easy, playback clear. Discs can also be played on 33⅓ RPM phonograph.

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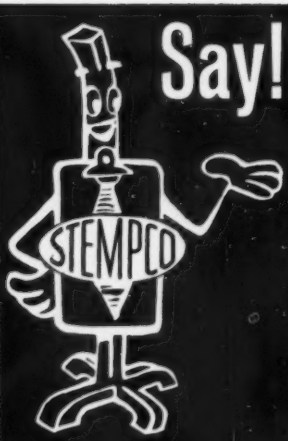
Please send information on the new, battery-powered, all-purpose Traveler.

NAME _____

TITLE _____

In a hurry? Just call your local SoundScriber representative. He's listed in the yellow pages under "Dictating and Recording Equipment."

For More Information Circle No. 320



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(Without Casters)

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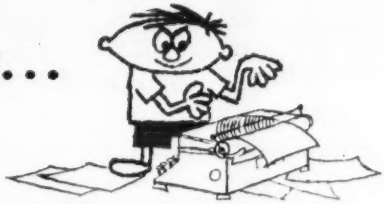
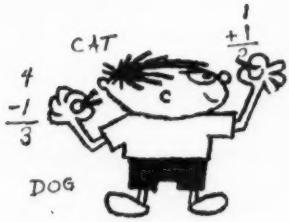
For More Information Circle No. 331

Ever try a DAV-A-MAT?

YOU CAN TYPE ON IT...





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DRAW ON IT!

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PERFECT OFFSET COPIES

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Davidson

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Subsidiary of Mergenthaler Linotype Co.,
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I want to know more about the Dav-A-Mat Paper Masters and Davidson Offset Duplicating Supplies.

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Company _____

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For More Information Circle No. 280

OM 5-59

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among the world's finest duplicating products:

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are you ready to fill the NEW NEEDS of today's customers?

To meet more fully all of today's requirements Allied research has developed a whole new concept in specialized products.

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THE NEW ALLIED RIBBON COUNTER DISPLAY

Your ribbon sales and profits will get an extra lift with the new Allied counter display. Used alone, or in multiple units back-to-back, or in triangular or square formation, it secures attention at the important point-of-sale. Aside from its serve-yourself feature, it doubles as an impressive wall storage unit, which speeds service and provides a quick perpetual visual inventory of every item. Write today and find out how you can obtain one or more of these displays without charge.

Better still, let the Allied man show you this display and other sales helps that are available to you as an Allied Dealer—without charge—and you'll begin to appreciate the value of an Allied franchise.

ALLIED CARBON AND RIBBON MANUFACTURING CORPORATION

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For More Information Circle No. 305

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functional beauty

styling that sells...

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Everyone who sees the new REGNA admires the wonder of streamlined FUNCTIONAL BEAUTY.

Everyone who tries this sturdy and dependable adding machine becomes a "high speed" operator — fingertips literally float over the moulded keys!

Different capacities; fully automatic safety keyboard; models in light grey or ivory. Also low-priced hand operated models.

In Canada: Regna Cash Registers of Canada Ltd., 704 Notre Dame St. W. Montreal, Que., and Business Equipment Machines, 489-R King St. W. Toronto, Ont.
OUTSIDE CONTINENTAL U.S.:
Jorgen S. Lien, Box 507, Bergen, Norway

It's low priced! It's profitable!
Mail the coupon—Mail it today—
Mail it NOW!

REGNA

REGNA CASH REGISTERS INC.
175 Fifth Avenue, New York 10, N. Y.

Gentlemen:
Please rush more information on the new Electric Regna Adding Machine and outline advantages of becoming a Regna Dealer.

Name _____

Address _____

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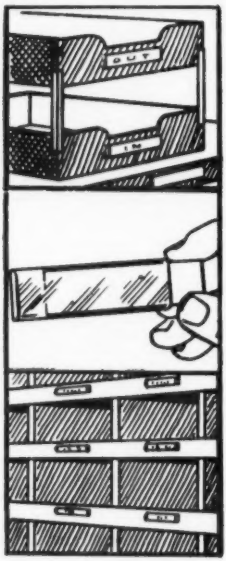
Zone _____ State _____

For More Information Circle No. 231

You'll find things easier with HOL-DEX



Use Hol-Dex transparent, insertable Label Holders on shelves, binders, boxes, bins, trays, desks, drawers, cabinets. Identifies – classifies.

Labels stay clean and legible. Easy to change. Hol-Dex sticks anywhere, won't mar. Easy to remove. Eight transparent colors permit color coding. Made in 3/8", 1/2", 3/4" and 1" widths. Standard length six inches. Usually cut into 3 two-inch or 6 one-inch units. Price 30¢ for 6" strip.

Commercial stationers and others sell Cel-U-Dex trouble savers.
Or write for free sample and folder.

- *Label clean and quick.*
- *Just press on.*
- *Mars nothing, no holes.*
- *Inserts slip in or out.*
- *A seamless plastic tube.*
- *Lengths to 36" available.*

CEL-U-DEX CORP.

NEW WINDSOR, NEWBURGH, N. Y.

For More Information Circle No. 269

ROCK 'n ROLL?

NOT IN THE OFFICE!

Tiffany's shake-proof construction just cannot rock 'n roll. Exclusive design features eliminate tiring vibration and greatly abate nerve-racking machine noises. That's why they're "first choice of office workers and management everywhere."

MODEL 5000

MODEL 5002 identical with Model 5000 except that it has 2 leaves

Rigid . . . providing "safety insurance" for costly office machines. Framework ⅛" thick, angle and channel steel, reinforced. 4-cup, open-top reduces machine noise and vibration. Adjusts to hold most size machines.

MODEL 8002

EXTRA-HEAVY DUTY stand for Electric Typewriters, Bookkeeping Machines, etc. VIBRATION-Free, amazing strength and rigidity. Open-top . . . the "escape-hatch" for noise dissipation.

There's a* TIFFANY *that's best for every purpose

MODEL 2300

UTILITY TABLE with countless uses in offices, factories, schools, hospitals. Heavy steel throughout. Rounded corners on tubing. Table is stationary with brakes ON; portable with brakes OFF.

MODEL 1000

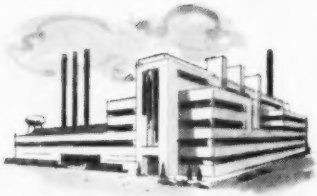
BOOK STAND

Has self-leveling top; automatically keeps pages flat for "reading with ease from ABC's through the XYZ's." It's portable. Adjustable height. Saves time. Saves energy. Takes only 16" x 21" floor space.

TIFFANY STAND CO. 7350 FORSYTH ST. LOUIS 5, MO.

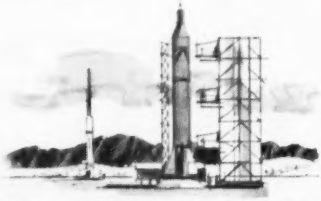
For More Information Circle No. 267

In Retailing, all kinds of progressive establishments are whisking through on-store inventories with the Marchant *Rapid Multiplier.*



In Manufacturing, the costing, billing, payroll and other departments are boosting figurework production with the Marchant *Figurematic.*

In the World of Finance, the Marchant *Figuremaster* by the tens of thousands is processing urgently needed calculations swiftly and accurately.



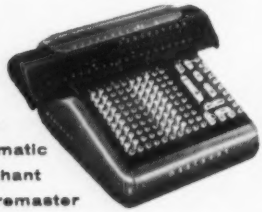
In Science and Engineering, the Marchant *Deci • Magic* is enabling key personnel to concentrate less on figuring and more on creative productivity.

Gain the advantages of a Marchant calculator specially programmed for your kind of figurework

Wherever figurework is performed, a specially programmed Marchant calculator does the job best . . . delivering faster figurework, saving time, money.

Drawing on a half-century of experience in serving calculator users in all fields, Marchant has developed calculators and methods for the most efficient performance of virtually every type of figurework. There is a Marchant calculator programmed for the job, whether in a small business office or in a giant organization where highly specialized calculations are performed.

To see in action the Marchant *programmed* for *your* figurework, ask the nearby Marchant office for a demonstration on your own figuring. Or for full information, send the reader-inquiry card or write on your company letterhead.



Fully Automatic Marchant Figuremaster

Modern Management Counts on Marchant

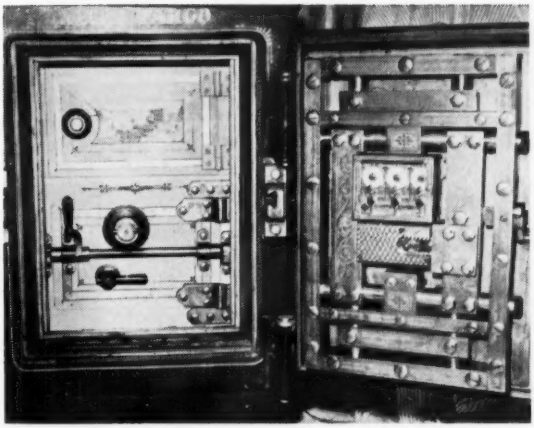
MARCHANT CALCULATORS

Division of SMITH-CORONA MARCHANT INC.

OAKLAND 8, CALIFORNIA

For More Information Circle No. 250

Camera!



Made by Diebold, Inc., in 1870, this safe once was owned by Wells Fargo Co. Currently belonging to an antique shop called Pueblo Village at Indian Rocks Beach, Fla., the safe is decorated with a stage coach painting, has three time locks and weighs 6000 lbs. It is still in operating condition.

World's heaviest camera is used to photograph Gerri Willer, "Miss Chicago Photoflash, 1959," by Leonard S. Florsheim Jr., president, Robertson Photo-Mechanix, Inc. (left) assisted by Clay Chapin of North American Aviation, Inc. The 18,250-lb. camera was made by Robertson for North American to produce precision templates for components of F-108 and B-70 planes.

SAKS FIFTH AVENUE

IN RESPONSE TO YOUR REQUEST FOR AN ITEMIZED BILL, WE ARE PLEASED TO ENCLOSE AN EXACT COPY REPRODUCED BY A SPECIAL PHOTOGRAPHIC PROCESS. IT WAS DEVELOPED ESPECIALLY FOR US AND IS ANOTHER INSTANCE OF OUR CONSTANT EFFORTS TO GIVE OUR CUSTOMERS THE BEST IN SERVICE.

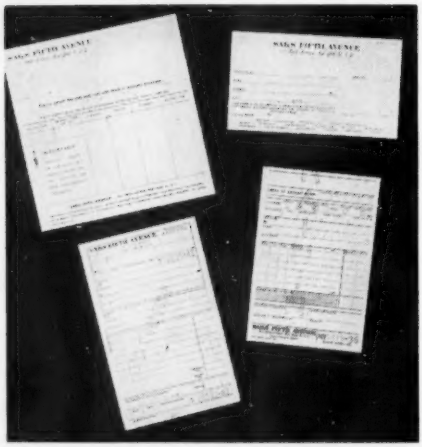
IT WOULD BE VERY MUCH APPRECIATED IF YOU WOULD RETAIN THE ORIGINAL SALESCHECKS, REMITTANCE SLIPS AND CREDITS WHICH WE ENCLOSE WITH YOUR MONTHLY BILLS.

Saks sends this card (left) to the customer along with duplicated copies of saleschecks like those shown below.

Saleslip Copying

Saks Fifth Avenue, New York, has hundreds of requests each week from customers for clarification of bills. According to Herman Spar, treasurer and controller, many customers need duplicates of their original saleslips for tax purposes, insurance records, checking past accounts and to replace lost slips. All credit transactions are microfilmed, so a complete record of each customer's account is available.

In the past when a customer wanted information, the transaction was located in the file, put on a microfilm viewer and the information transcribed on a worksheet. Later this was typed up and sent to the customer. Six employees were engaged in full-time transcription of information from microfilm records.



Now, only three employees are needed since two steps have been eliminated — writing and typing. A Thermo-Fax microfilm reader-printer, made by Minnesota Mining & Mfg. Co., makes ready-to-use copies from microfilm records in ten seconds. Saks uses two Thermo-Fax reader-printers near their central files.

Robert S. Leaf, media director, Burson-Marsteller Associates, New York, checks a magazine in the company's media file. The file uses four 30″ x 36″ Steelmaster sliding tray cabinets, 14″ deep, and can hold 1200 publications. The public relations firm is affiliated with Marsteller, Rickard, Gebhardt & Reed, Inc., advertising agency.

Dictation recording station of Sandusky Foundry, Sandusky, Ohio, showing an integrated Peirce dictating system. At rear are two Peirce master recorders which serve the remote microphone dictation network. The large recorders (center) are Peirce Voice-Actuated units for the PBX internal telephone dial dictation system. At right is a battery powered Peirce portable used by Sandusky executives while traveling.

Statistical System

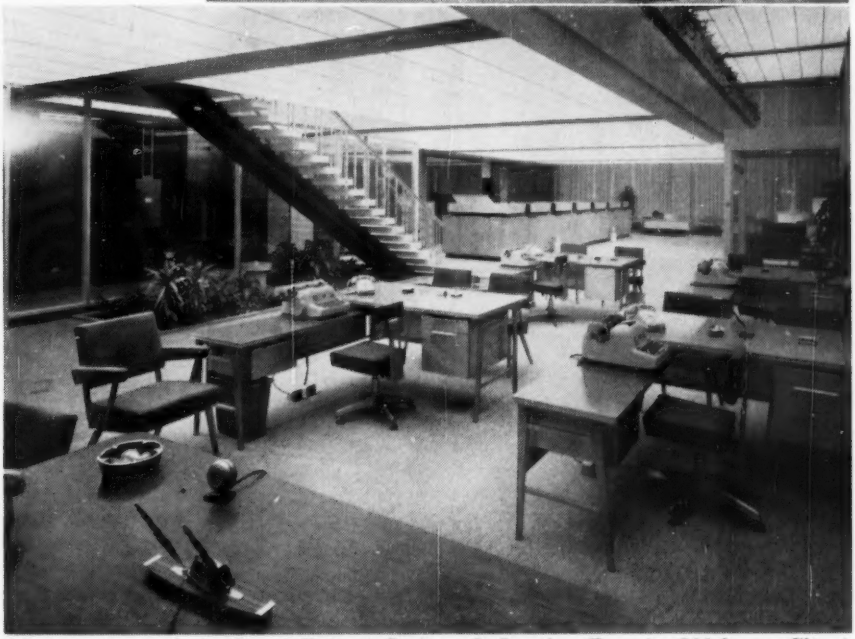
A Royal McBee Corp. Keysort tabulating punch speeds statistical reporting for the Roots-Connersville Blower Div. of Dresser Industries, Inc., Connersville, Ind. The machine (above) punches quantity data into body of marginally punched Keysort cards.

The punch also produces tapes containing accumulated totals of the items punched.

G. A. Henry, Roots-Connersville controller, checking tabulations on a tape produced by the punch.

The Keysort cards can be sorted into categories before being processed by the tabulating punch.

Membership record cards for Blue Cross, Blue Shield in Salt Lake City are easily accessible in these two Roto-Files made by Mosler Safe Co. From one to three file clerks can work comfortably at the units which are equipped with a workshelf which runs the length of the file.



Modern decor of the Local Federal Savings & Loan's offices in Oklahoma City is enhanced by General Fireproofing Company's Italic Styled desks and Goodform chairs installed by Western Bank & Office Supply Co.

Oasis of green lawns and palms surround the $1 million Salt River Project's office building, located in typical cacti-studded desert near Phoenix, Ariz.

Offices in the Desert

HENRY F. UNGER

Customers can pay their bills at this counter. Pictures of various sections of the widespread utility decorate the wall. The Salt River Project supplies electricity and irrigation to the Salt River Valley. Building houses over 400 employees.

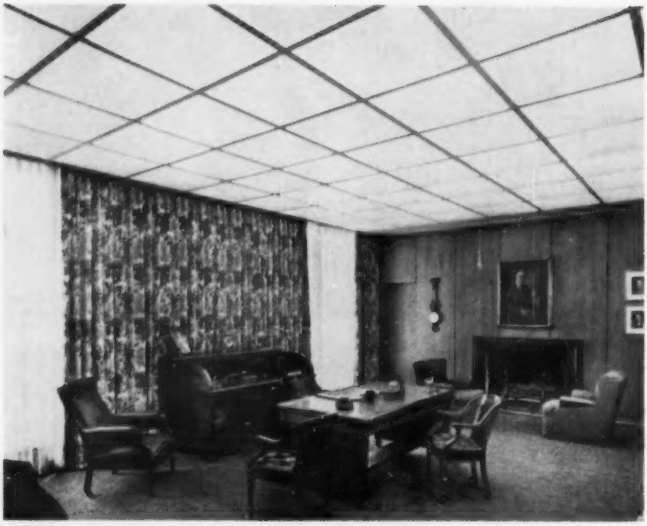
Interview section for job applicants. Applicants fill out forms on table in foreground, interviewers sit in the rear. (See opposite page.)

A portion of the engineering department in the new Salt River Project building.

Customers' accounting records are housed in rolling files which are equipped with telephones for relaying information.

Secretaries' desks face executive offices (at right). Entire building is air conditioned with separate units for tabulating section, board room and executive offices.

Coca-Cola's Executive Suite



This office in the executive suite of Coca-Cola Co., Atlanta, Ga., has not only the occupant's desk, but that of his father and grandfather as well. Suite was designed by Intramural, Inc., New York. Main design problem was to retain a traditional feeling, while achieving contemporary lightness and spaciousness.

Conference room retains traditional air but has modern simplicity.

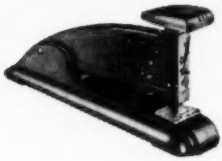
4
3
27

Swingline®

seen on more desks across the nation than any other brand!

Why? Because only SWINGLINE OFFICE STAPLERS have the famous open-channel for split-second loading...jam-proof performance. Exciting Jeweltone colors, ultra-modern design. No. 4 is a master desk stapler, holds 210 staples. No. 3 is a shorter desk model, holds 105 staples. No. 27 is a rugged one, holds 210 staples, can be imprinted with your company name, too! All sensibly priced. Contact your stationery supplier...today!

4



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Swingline, Inc.
Long Island City 1, N. Y.

For More Information Circle No. 265

EMPLOYEES ENTHUSIASTIC ABOUT NUARC...

Rapid Printer

PLATE MAKER!

You'll be enthusiastic, too! This time-saving and money-saving carbon arc lamp and printing frame combination (completely enclosed) makes long-running offset plates and duplicating masters *automatically*...reproducing line and halftone images with razor-sharp fidelity! So easy to use—because of simplified control panel—anyone can operate it. Actually pays for itself in *one year* if you make only six offset plates a week! Several models to choose from. The RP21 (illustrated) makes plates up to 21" x 24" in size. Takes up only 28" x 32" floor space. Spacious storage area. See your nuArc dealer for further details or write for Bulletin 230B-O.

nuArc® company, inc.

General Office and Factory: **324 S. Western Ave., Chicago 12, Ill.**

EASTERN SALES AND SERVICE: 215 FOURTH AVENUE, NEW YORK, N.Y.

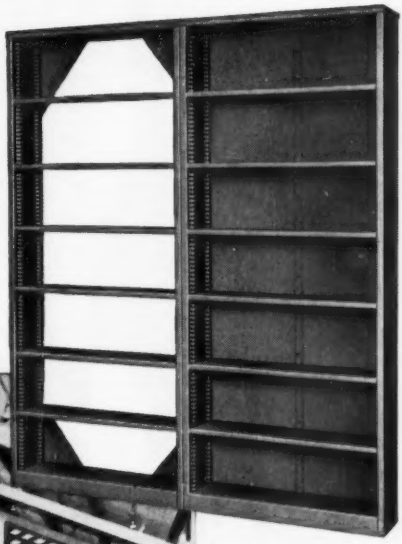
For More Information Circle No. 295

whether you want a yard or a mile

BORROUGHS Library Shelving

is your best buy!

Yes, from a yard (one 36"-wide unit) to a mile (1,760 units), it's BORROUGHS for library shelving that has everything! For instance . . there's a choice of heights, 42", 84", 90" . . single or double face, open or closed back units (open back units have corner bracing) . . the 9¼"-deep shelves are adjustable on ¾" centers without bolting . . 4 beautiful modern colors include spring green, dark green, gray, and fall tan, in electrostatically baked-on enamel . . but why not send for ALL the facts!



Send for colorful, 24-page, illustrated price list of complete office furniture line.

BORROUGHS MANUFACTURING COMPANY OF KALAMAZOO

A SUBSIDIARY OF THE AMERICAN METAL PRODUCTS COMPANY OF DETROIT

3010 NORTH BURDICK ST. amp® KALAMAZOO, MICHIGAN

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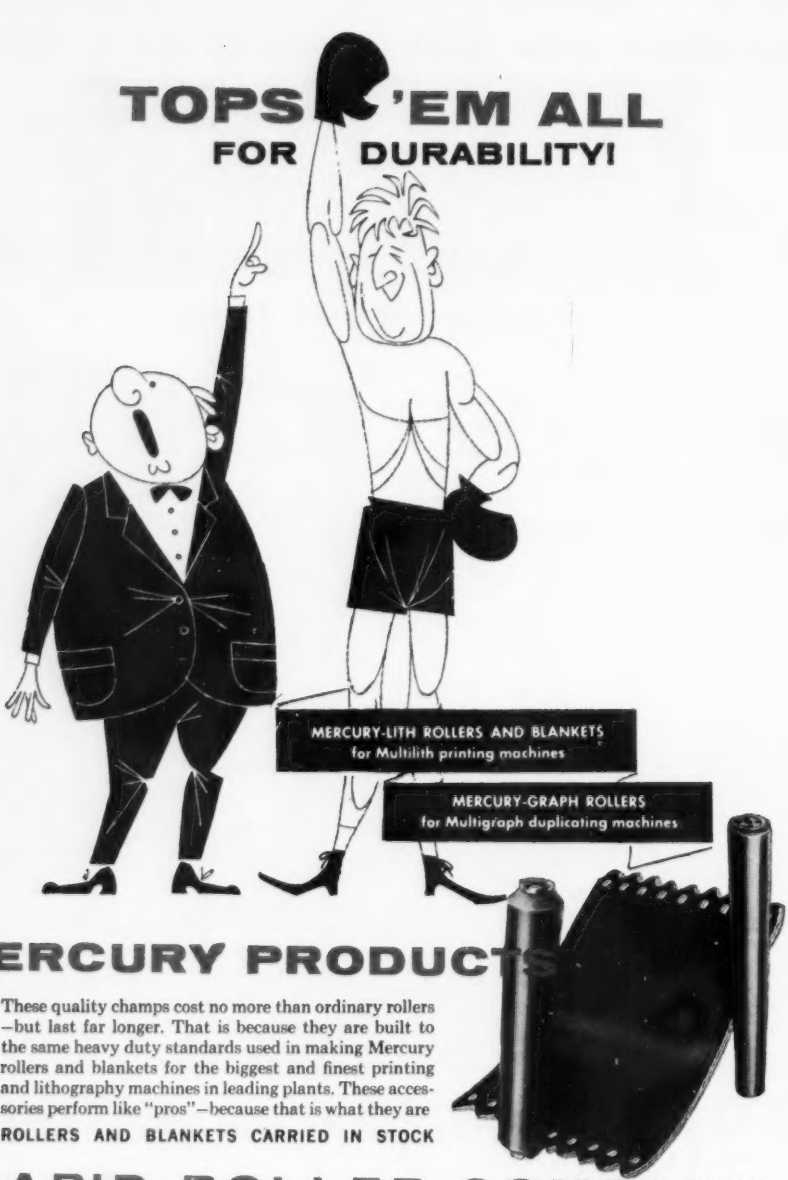
TOPS 'EM ALL
FOR DURABILITY!



MERCURY PRODUCTS

These quality champs cost no more than ordinary rollers —but last far longer. That is because they are built to the same heavy duty standards used in making Mercury rollers and blankets for the biggest and finest printing and lithography machines in leading plants. These accessories perform like "pros"—because that is what they are

ROLLERS AND BLANKETS CARRIED IN STOCK

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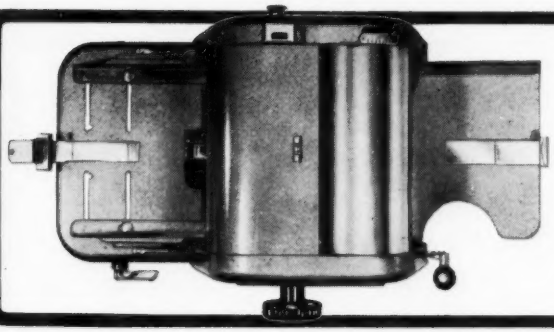
For More Information Circle No. 244

Copy-rite Duplicators

Golden Streak Electric

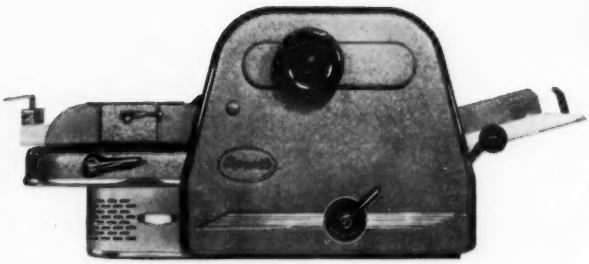
SPIRIT DUPLICATOR



WITH THE MOST ADVANCED FEATURES IN SPIRIT DUPLICATORS

Clean, sharp copies without ink, gelatin, type or ribbons. Puts the speed and efficiency of an all electric operation in your hands at a lower cost than you would imagine.

$299.50
plus F. E. T.



EXCLUSIVE TELL-TALE SIGNAL LIGHT

Golden Streak automatically shuts off after last sheet is duplicated. Tell-Tale Signal indicates current is still flowing--lifting control knob shuts off current, stops fluid flow and releases roller pressure in one single operation.

copy-rite by
WOLBER DUPLICATOR AND SUPPLY

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PATENTED "STA-CLEAN" METALLIC
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The introduction of new products, and improvement of those already established, calls for a never-ending search on the part of our laboratory staff.

Only by continually striving to find a better way to do things, can we fulfill our obligations to the many people who sell and use the products we make.

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SPECIALIZING IN MASTER UNITS
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GENERAL OFFICES AND FACTORY
HARRISON, NEW JERSEY, U.S.A.

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TOTALIA

mod. 2441

the adding electric printing machine
with the
"MIRACLE MEMORY"

LAGOMARSINO-FAI

Viale Umbria 36 - Milano (Italy)

Distributing Centers in U. S. A.

NEW YORK, Check Writer Co., 565 Broadway
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LOS ANGELES, Wholesale Business Machines, 7525 Beverly Blvd.
HOUSTON, Adding Machines Distributing Co., 2223 Caroline Str.
DALLAS, Wholesale Office Machines Co., 2000 North Lamar Str.

CANADA distributor: Nauta Bros., 3615 Danforth Avenue, Toronto.

For More Information Circle No. 270

Chasing the letter, invoice or other paper you want is neither efficient nor profitable — and totally unnecessary if you file by the ACCO method. Let your Stationer brief you on Accobind Folders, Accopress Binders and the Acco System for keeping papers in order and *safe*. See him today — and stop playing "Hare and Hounds" with your files.

"ACCO BOUND PAPERS ARE SAFE PAPERS"

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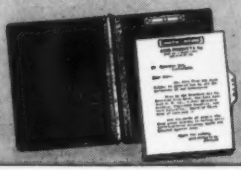

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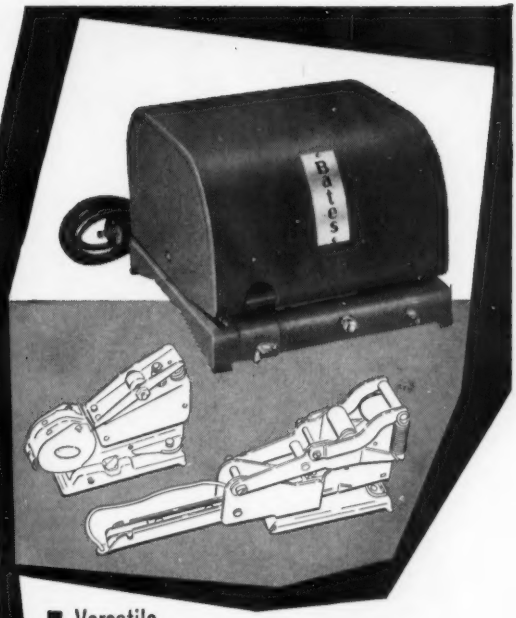
LIGHT DUTY
HEAVY DUTY
DOUBLE DUTY

BATES ELECTRIC STAPLER

MODEL C-H30



- Versatile
- Staples everything from 2 to 100 sheets
- One electric unit with interchangeable Model C and H-30 electric heads*
- For everyday use: "C" head with 5,000 brass staples to a load
- For heavy duty jobs: "H-30" head using high-carbon, chisel-pointed staples, up to 100 sheets. Holds 280 staples—¼", ⅜", ½"
- Only seconds to change heads

*May be purchased with either or both of above described heads.

Bates '56' Electric . . .
Automatic, staples at touch of paper. Standard staples, adjustable depth gauge. Removable, interchangeable stapling unit. Soundproofed.

Write Dept. O for literature and prices.

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SWIFT

presents the most remarkable adding machine ever designed!

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It is the world's lightest (6½ lbs.) and the most inexpensive (99.50) adding machine with nine column capacity, two-color printing and visible adding dials.

Once you have used the truly portable Swift Adding Machine in your office, store, home, or travelling —you will never be satisfied with any other!

ADDITIONAL OUTSTANDING FEATURES

No extra stroke required for totals or sub-totals, non-print lever for calculating—large size pica type for readability—short stroke handle for fast (150 OPM), easy operation.

only $99.50 plus tax

At better Office Machine Dealers everywhere or write for information TODAY.

SWIFT BUSINESS MACHINES CORPORATION
GREAT BARRINGTON, MASSACHUSETTS

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any angle
your
best buy

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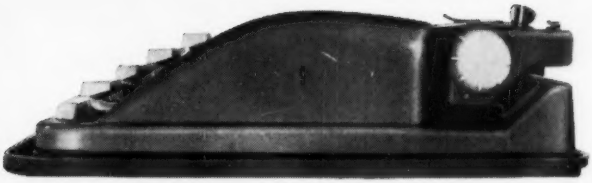
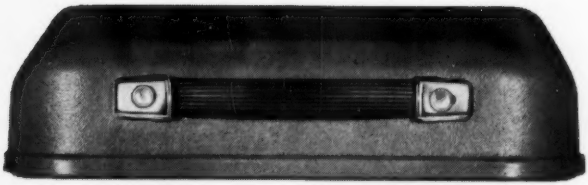
PORTABLE



Professional writers like Quentin Reynolds and Kenneth Banghart choose Cole above all other portables, because only Cole has all the important features they demand in a typewriter . . . Mist Green, Desert Sand or Cole Gray. Complete with matching carrying case . . . only **$94.50** plus tax.



COLE STEEL OFFICE MACHINES, INC. • Affiliate of Cole Steel Equipment Co., Inc. • 415 Madison Avenue • New York 17, N. Y.

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Colonial Golden Rulesmanship:

"...and to value your smallest accounts equally as your largest!"

We are proud that the superior quality of our products has earned us the friendship of so many fine firms, and we take extra pride in meeting their special requirements with care and promptness.

We at Colonial will be happy to discuss *your* special requirements ...may we hear from you?

Specialists in the manufacture of spirit master units, spirit carbon, hand cleansers and fluids.

Colonial Carbon Company SKOKIE, ILLINOIS

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THIS IS SCRIBE, the *dependable* office dictating system that won't let you down. This rugged *magnetic tape* machine gives you simplicity of operation and superb fidelity of voice reproduction.

THIS IS THE SCRIBEPAK magnetic tape magazine, preloaded with 30 or 60 minutes (your choice) of hi-fidelity reusable MYLAR tape. No irksome threading, no need even to touch the tape. Snap on a SCRIBEPAK, and vou're ready to roll!

THIS IS YOU, confident that the reports, memos, letters you dictated before leaving the office will be *accurately* transcribed. SCRIBE magnetic tape records each syllable crystal clear and error-free . . . cuts transcribing time, eliminates misunderstood words.

THIS IS YOUR SCRIBE DEALER who will show you, in your own office, the remarkable new SCRIBE SI-50 Dictator-Transcriber; the SI-60 Transcriber; or the versatile SI-70, adaptable to any type of remote or network system.

attention dealers

Protected territory franchise may be available in your area. Sales and service facilities required. Profitable potential volume on low investment. Write for details.

Thousands of SCRIBE machines are today in use by major agencies of the Federal Government, by business and by industry.

BUSY MEN USE **Scribe**

For information, or for the name of your nearest dealer, write or call SCRIBE Distributors Co., 6949 W. North Ave., Oak Park (Chicago), Illinois.

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For More Information Circle No. 247

←For More Information Circle No. 230

Filing and finding is 25% faster... and easier, too...with GF's Super-Filer

Ever had to wait and wait while a secretary struggled to find something in a file? Ever wondered why filing takes so much of her time? Then you'll like the GF Super-Filer. With its exclusive swing front, it reduces time spent on filing and finding by 25%. And because it handles so much more payload, Super-Filer requires 33% less floor space. Super-Filer does nice things for a girl's morale, too—she knows you've made her job easier by giving her the finest file made.

To boost productivity in your offices call on GF—America's largest maker of metal business furniture. Only GF offers complete planning, design and decorator services that take into consideration, not just space utilization and work-flow, but the many human factors that make for efficiency.

An informative booklet, "PLAN TO PROFIT FROM YOUR OFFICE INVESTMENT", is yours for the asking. Just call your GF branch or dealer, or write The General Fireproofing Company, Dept. L-23, Youngstown 1, Ohio.

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METAL BUSINESS FURNITURE

For More Information Circle No. 258

A Pattern Punched Card System for Data Retrieval

F. E. LYNCH, Controller, and JOHN F. GLENN, Research Chemist,
L. D. Caulk Co., Milford, Dela.

WE INSTALLED tabulating equipment with the express purpose of bettering our accounting in billing, accounts receivable, accounts payable and sales analyses. Then we added additional procedures such as equipment and depreciation, inventory, etc. About three years ago our research department asked if it would be possible to use some part of our tabulating equipment for sorting their technical literature abstract file. This procedure brought into being a new concept in punch cards as far as we were concerned—pattern punching. With an additional attachment (Fig. 1) on our sorter, we were able to pull one or many abstract cards out of the complete file in a matter of seconds. Such an operation on the old system had required about 30 minutes for each sort.

The results were so satisfactory that we decided to find further applications for this type of punch card procedure. We conceived the idea of a unit cost file on all of our salable items. Inasmuch as our company has no job cost or standard cost system, the unit cost price of our salable items change when the price of any component changes. So we installed a unit cost file wherein it would be unnecessary to go through the complete file to make price changes when a component part price change was effected.

Since pattern punching functions on a position punch instead of the standard coding punch, many coded items may be inserted in the same field of the card. One or more component parts coded with a random number can overlap in the same field of the card which would be impossible under the regular coding

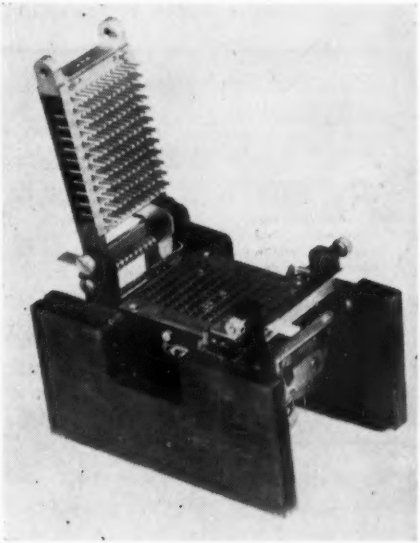


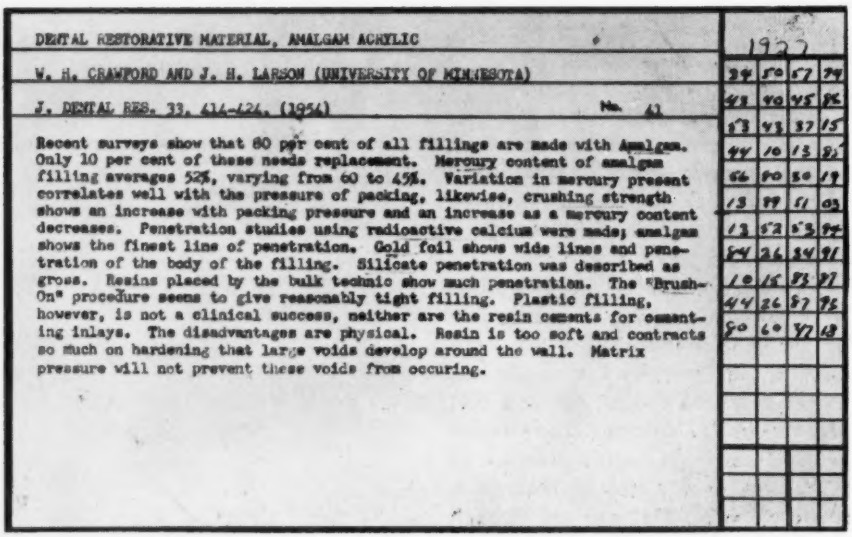
Fig. 1. The sorting attachment used for pattern punched cards.

METAL BUSINESS FURNITURE
For More Information Circle No. 258

of numbers on conventional cards.

With a tabulating card for each individual salable item, the codes of all component parts of that product can be inserted in that card. When a component part changes price, we can pull cards of every product, of which this component is a part, in a matter of seconds on our sorter. Even though we have not yet had as much experience with the unit cost filing procedure, as we have with our literature abstract filing, we feel confident that this system will save us considerable manhours. Described below are the procedures for literature abstract filing control and unit cost filing control.

One of the most difficult factors to reckon with in the handling of research problems is keeping abreast of scientific literature as it appears in the many periodicals. This is difficult because of the great volume which appears, the lack of accessibility to the entire field of literature and the absence of easily used indexes. In almost all research problems, the researcher must make his own index of literature concerned with the special field or branch in which he is working. Making literature abstracts in one special science is not difficult but it may be time-consuming. On the other hand, filing these abstracts in a manner so that the necessary information can be retrieved easily and quickly, can become very complicated. In our own laboratory we designed a hand-sorted edge-punched card system to facilitate location and selection of data from literature abstracts by our various personnel. As time went on and the number of cards increased, which it is bound to do at a rapid rate, handling our manual system became very cumbersome. To simplify our handling and sorting cards, by mechanical means, we


DENTAL RESTORATIVE MATERIAL, AMALGAM ACRYLIC

W. H. CRAWFORD AND J. H. LARSON (UNIVERSITY OF MINNESOTA)

J. DENTAL RES. 33, 414-424, (1954) No. 41

Recent surveys show that 80 per cent of all fillings are made with Amalgam. Only 10 per cent of these needs replacement. Mercury content of amalgam filling averages 52%, varying from 60 to 45%. Variation in mercury present correlates well with the pressure of packing, likewise, crushing strength shows an increase with packing pressure and an increase as a mercury content decreases. Penetration studies using radioactive calcium were made; amalgam shows the finest line of penetration. Gold foil shows wide lines and penetration of the body of the filling. Silicate penetration was described as gross. Resins placed by the bulk technic show much penetration. The "Brush-On" procedure seems to give reasonably tight filling. Plastic filling, however, is not a clinical success, neither are the resin cements for cementing inlays. The disadvantages are physical. Resin is too soft and contracts so much on hardening that large voids develop around the wall. Matrix pressure will not prevent these voids from occuring.

1957

24	50	67	74
43	40	45	86
53	43	37	15
44	10	13	83
66	90	50	19
13	99	51	03
13	52	53	94
54	26	54	91
10	15	83	97
44	26	57	75
50	60	37	13

Fig. 2. A typewritten abstract coded for machine sorting.

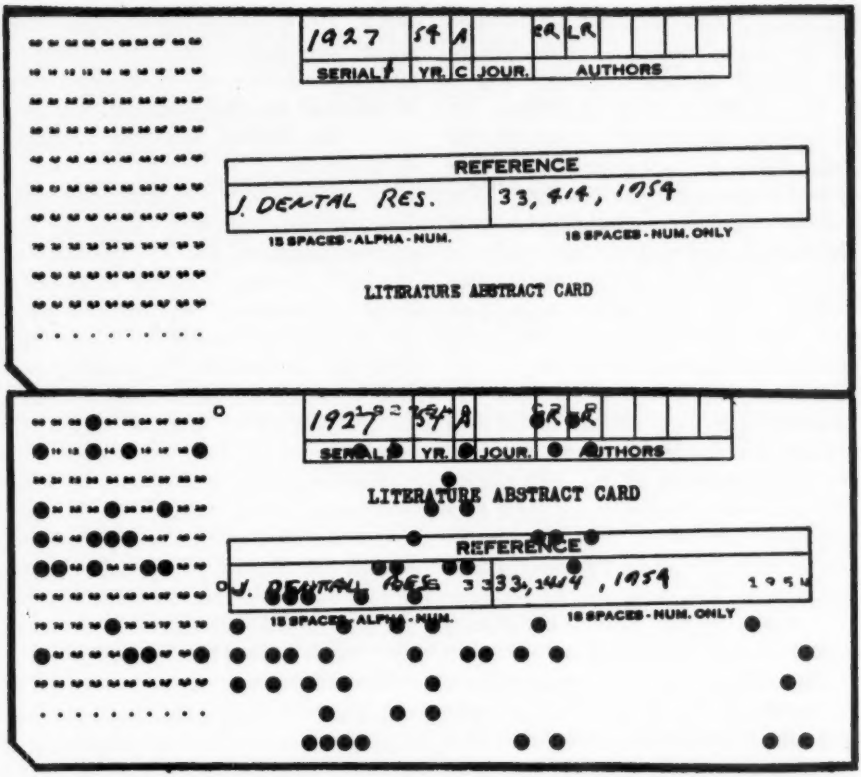


Fig. 3. Unpunched abstract card (top) and punched card after interpreting.

use the machine system described below.

Accounting punched card machines can be adapted easily for literature file use. The literature cards can be punched exactly the same as ordinary accounting system cards are handled. The usefulness of the machines, especially for subject code sorting, can be increased by adding a pattern sorter (Fig. 1). This allows sorting as many as 12 columns at one time so that our code system can employ superimposed punching over a 12 column area. This is not possible with machine coding as ordinarily used for accounting.

In the machine sorted system operated in our research department, the abstract is dictated and typed on a 5″ x 8″ file card (Fig. 2). The selected subjects are coded from a subject dictionary previously prepared. A sequence number is placed on the card. After the punched card is prepared, abstract card is placed in a consecutive file according to sequence number.

Our code consists of a four unit number from 00 to 99 selected at random*, for the subjects included in the

* Table XXXIII, Fisher and Yates, *Statistical Tables*, Hafner Publishing Co (1949).

dictionary. Code numbers are inserted in the spaces provided at the right of the abstract file card (Fig. 2).

To facilitate card punching by accounting department personnel, the face of the card is marked by hand as shown in the upper card in Fig. 3. The punched card is pin hole punched in the subject field with the remainder of the card printed to aid inscribing other pertinent data. The author letter, year and entire journal reference or patent number are marked on the card.

Six authors can be included by punching the card in the appropriate section: the initial letter and first succeeding consonant of the last names. The pin hole punches, made by a spot punch for the subject code numbers in this section, are done by the research department. The remainder of the card is punched in the accounting department by the usual procedure.

An arbitrary limit of seven subjects per card is placed on punching the subject field to reduce the probability of a false sort. If more than seven subjects are desired, as is often the case, a second card is used and punched with the additional subject codes. The same basic data as to source, authors, etc., is repeated on all cards from any one abstract.

After cards are punched, they are checked by printing on an interpreting machine (see lower card Fig. 3). The punched cards are filed with the machine record unit. Cards containing the abstracts are unpunched and placed in the department file in accordance with their sequence number.

When information is desired from the file, the subject code numbers or author letters are given to the machine unit which sorts their cards. They return to our department a list of the sequence numbers of the filed abstracts. We then select the desired literature abstracts from this list.

If desired for bibliographical purposes or other records, a list of the reference material can be printed automatically directly from the cards on a tabulating machine. A tabulation of a list of abstracts concerning resin filling materials is shown in Fig. 4. It is possible to prepare a printed tabulation, such as that shown in Fig. 4, within 15 minutes after initiating the request.

We have found this system of filing and selecting information to function very efficiently, much more so than our former hand sorted, edge-notched cards. It saves considerable time for the researcher in literature searching because the sorting is done mechanically and by other personnel.

With the type of cost system we use, it is necessary to review all salable items for cost changes when the unit cost price changes for any basic raw material item. So we decided to look for a short-cut in our method of unit cost price changing. After considerable study, we adapted the same basic system as the above literature abstract procedure.

Our punched card for unit cost (Fig. 5) was designed as follows: the component part field is on the left with numbers running horizontally from 00 to 99. The product code of the salable item, in the upper part of the card, is used for listings, reference and sorting purposes. In the lower portion of the card the description of the salable item is placed along with the unit cost of the

101650	041	TYFR	J DENTAL RES 29436		19.50
106651	000	KNCL	U S P 2569767		
150851	065	ZN	ORAL SURG O MED 4 1563 67		19.51
152651	036	WLFFSC	J A D A 420253		19.51
152751	086	SK	W VA DENT J 26 4		19.51
154251	039	CH	J CAN DENTOA 17 427		19.51
191751	036	ARSM	J A D A 430684		19.51
108652	036	NLWLPF	J A D A 440288		19.52
109452	009	AN	BRITT DENTOJ 92 21		19.52
151052	009	KRMC	BRIT DENT J 92 281		19.52
159952	009	KRMC	BRIT DENT J 92 311		19.52
160552	106	HL	J WIS ST DENT 28 140		19.52
160652	026	LC	DENTAL SURVEY 28 940		19.52
161852			LEDERLE LAB AM		19.52
163152	009	CT	BRIT DENT J 92 67		19.52
164052	026	DL	DENT SURVEY 28 332		19.52
164352	009	CT	BRIT DENT J 93 220		19.52
164552	053	NL	J PROS DENT 2 513		19.52
165952	009	MCKR	BRIT DENT J 93 255		19.52
166152	009	MCKR	BRIT DENT J 93 291		19.52
179552	000	LNEL	SWISS 279 640		
176853	000	DT	BRIT 687 299		
186353	000	ARLFGN	MINERVA STOMAT 2 109 15		19.53
174253	036	SMSC	J AM DENT ASSOC 46 540		19.53
177253	036	PFNLSW	J A D A 470516		19.53
178953	039	JNSS	CAN DENT ASSOC 19 533		19.53
179053	041	BR	J DENT RESO32 652		19.53
179953	036	GR	J A D A 460265		19.53
180253	036	CLSC	J A D A 470448		19.53
183253	143	ZN	D D S 2 232		19.53
183453	039	SC	CAN DENT ASSO 19 139		19.53
185953	036	CY	J A D A 470532		19.53
191554	033	CSER	IND AND ENG CH 1619		19.54
192754	041	CRLR	J DENTAL RES 33 414		19.54
192954	036	SWSHYS	J A D A 49513		19.54
193854	036	CY	J A D A 48266		19.54
203155	036	NY	J A D A 50 7		19.55

Fig. 4. Printed tabulation of an abstract. Column headings are: 1. sequence number of abstract; 2. year; 3. publication; 4. author; 5. reference, volume, page, year, or patent number.

item. The description is used for easy reference and listings, and the unit cost reflects a current total cost of the salable items.

Each item or finished product package is made up of many component parts, such as raw material ingredients, bottles, boxes, caps and corks. Each component part is coded with a five unit random number, selected as described above. A code number book was prepared of all component parts, with random numbers assigned to each. One tabulating card is prepared for each finished product with the following information punched in the card: random numbers for each component part, code number of finished products, name of finished product and its cost.

When we receive a price change of a component part, the random code number is located in the code book and set up in the sorter attachment (Fig. 1) which is then engaged with the sorter. The complete file of cards, with one pass through the sorter, is separated for the code number and the remaining cards, which do not have the sorted pattern, fall in the reject pocket of the sorter. With the selected cards as reference for price changes in the cost records, it is simple to change prices

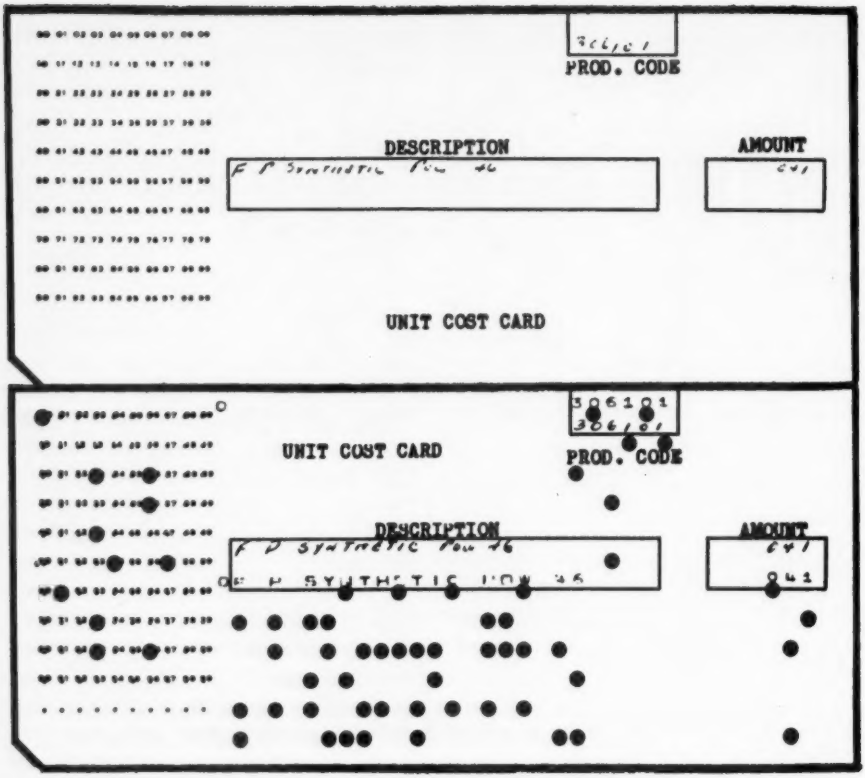


Fig. 5. Holes in the component part field are made with a hand punch (see Fig. 6). The other codes are punched by machine.

since the complete file does not have to be reviewed.

To effect an added time savings, we use special punched cards with pin holes punched in the component part field (Fig. 5). These pin holes are made with a hand punch (Fig. 6). Punching this field manually saves time because pattern punching is not readily adapted to a standard machine punch. The remaining part of the card (finished product code, description, and unit cost price) is punched on a regular Remington Rand punch.

Tabulated listings can be made of the unit cost file for review by the sales department for obsolete salable items; and also by the accounting department for preparation of unit cost cards for inventory purposes. These cards also are of use to the purchasing department for studying multiple uses of raw materials. The cards are also used to speed up and more accurately cost our daily sales invoicing.

With this sorter attachment and the

pattern punching concept, many novel ideas can be developed for new procedures, and revision of old procedures. We have developed a system for formulating colors in our products. In the formulation of shades, we found it necessary to do shading empirically because there is a master set of standard shades which has to be matched for all esthetic products. Observation of color change development in the shades is carried out over a period of six months.

In our color system, the pattern is formed by the pigment quantities of the formula, thus reflecting a pattern change with every variation of the color formula. Ten or more different formulas are made every other day with each requiring a period of six months for complete observations. Since shade formulas may differ but slightly, and with a large number of formulas in process, accidental color duplication becomes a big problem. But with the color formula representing the pattern itself, we eliminate the chance of duplicating formulas.

Two punched cards are prepared for each variation of a color formula. The first card is for tabulating observations of 24 hours, one-week and two-week periods. The second card tabulates observations of one, two, four and six months. This system will function for the development of one shade or a series of shades.

The punched card (Fig. 7) for color control has the formula field at the left with numbers running horizontally in 11 rows from 00 to 09. As can be seen, this pattern field is divided into five separate and distinct sections, one for each pigment of the composition. The remainder of the card is divided into columns for the following data:

ABS (absolute color number) which is the final color developed after aging for six months.

CL (average color or shade number) which is the shade, but may not be exact.

Powder number given each individual formula in the laboratory notebook.

Composition of the formula under consideration, expressed as percentage quantities of pigments.

Std., the color standard against which the experimental shade is compared. This is selected from the master shade guide.

K—Numbers 1-6 which designate the base pigments used for resin coloring. These quantities make up the actual formulation.

Shade, and change in shade, measured on the Hunter Color Difference Meter (Gardner Laboratories, Bethesda, Md.).

In this system, color is defined by three letters; "L" is the reflectance value, "A" is the amount of red or green, "B" is the amount of yellow or blue.

From the information punched in the cards, many tabulations of color data can be made. Below are some of the

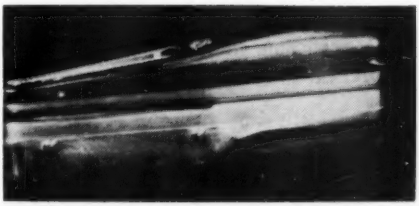


Fig. 6. A hand punch saves time in pattern punching (see Fig. 5).

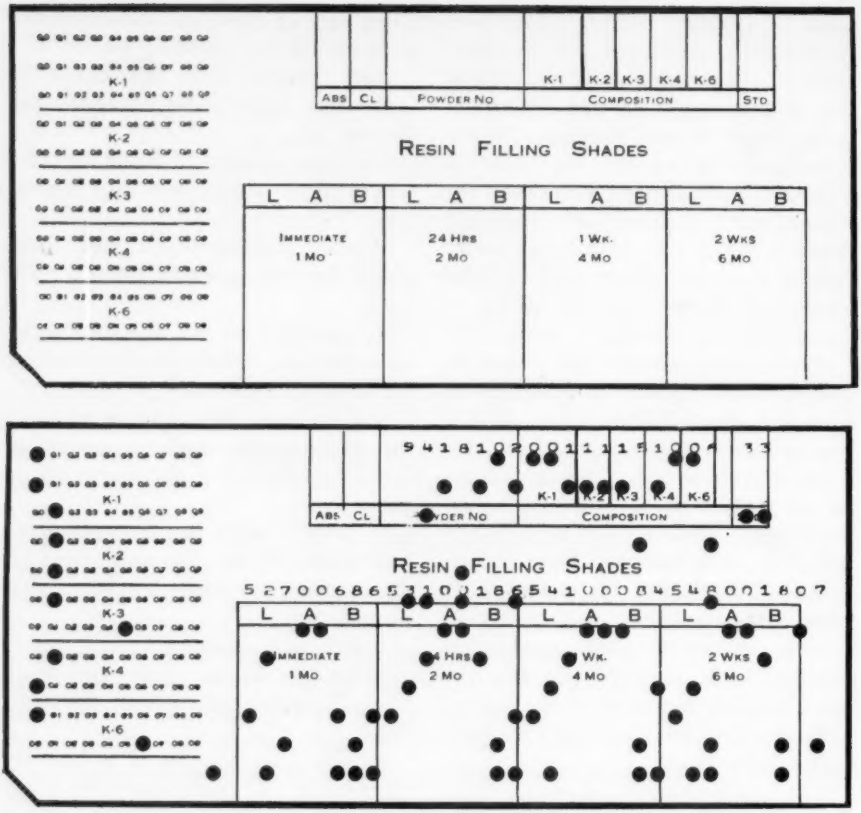


Fig. 7. The card that is used for color control, before and after punching.

possible tabulations:

1. Composition, by arranging in ascending order the percentage of ingredients you get a printed list of all formulas arranged in easy order for reference. This same tabulation is very handy in checking out new compositions.

2. Formula (powder) numbers for comparison with formulas in other products of a like nature.

3. Color designation tabulation can be made of L, A and B as a group or individually. Tabulations also can be made of time periods (24 hours, etc.) in each of the designations explained previously.

4. Shade values can be sorted to come up with an individual powder number. This powder is also useful in checking out any given composition.

From the multiple information in the card, many other tabulations, both individually or in multiples, could be made to minimize work in color formula development.

Setting Office Standards by Stop Watch Time Studies

C. J. BERG JR., Director, Office Systems & Methods, Westinghouse Electric Corp., Pittsburgh, and E. V. GRILLO, Management Consultant, New York.

THE USE OF the stop watch is one of the most common methods of setting work standards but, because the stop watch is so widely known and its uses — and abuses — often discussed among workers, it must be used judiciously. The fundamental approach to stop-watch study is to break down an operation into its elements and measure each separately. This is done by recording a satisfactory series of occurrences in exact times. A norm must be established for each element. Usually this means that the times observed must be scaled down or up to a common concept of normal work. This is the most important and most difficult part of such a study, and that which causes most disagreement, particularly in office work where there can be so many variations in the work content.

Basic motions, such as grasp, reach, position, etc., are of too short duration to be successfully timed, and must be grouped as elements of stop-watch study. At which level are these elements grouped for timing? There are two possibilities.

Many time study men prefer elements such as "grasp paper and transport to typewriter," "position paper in machine," "complete form letter on typewriter," "remove paper and dispose," etc. Together these elements constitute an entire operation, such as "type form letters." The jobs must be divided into elements that can be timed readily. The second possibility is to time the entire operation as a whole, ignoring separate times for each element.

There are several advantages to the first approach. The breakdown into elements pinpoints unnecessary work. It also determines the frequency of irregular occurrences for which special adjustment may be necessary. Furthermore, as additional standard times are developed for elements common to many office operations, it is possible to apply them to other jobs. But, if the object is to set standards rapidly, the second approach is acceptable.

There are three kinds of stop watches, divided into seconds, decimal hours, and decimal minutes. For office work measurement, decimal minutes are usually preferable. In addition to the watch, there must be a time study board on which the watch can be mounted in the line of vision of the analyst, and space for holding observation sheets.

There are two methods of employing

Condensed from a chapter in the book *Work Measurement in the Office* by C. J. Berg, Jr. and E. V. Grillo, published in March by McGraw Hill Book Co., New York, $5.75.

STOP WATCH TIME STUDY WORK SHEET

Department: Customer records
Date: 12/16
Clerk observed: Cynthia Morris
Position: Posting clerk
Operation: Post change of status
Observer: N. Jones

Description of element	Elemental unit time								Selected time
1. Put away completed form and position new form.	05	07	05	06	06	04	07	06	06
2. Review form to verify information shown.	12	13	12	14	12	15	13	12	12
3. Search for record card.	15	16	13	17	16	14	15	15	15
4. Enter description on form.	25	29	24	23	20	26	25	29	26
5. Initial card and put away.	14	15	10	12	09	13	15	12	13
6.									
7.									
8.									

Comments

Rating of employee: 85%
Equipment used: Visible files
Physical conditions: Good

Fig. 1. Suggested form for stop watch time study sheet for snap-back method.

the stop watch. In the snap-back method the watch is returned to zero at the end of each element. This method saves time, gives direct answers without numerous subtractions, and is less complicated. But the analyst tends to neglect the delays between elements.

In the continuous method, the watch is read at the end of each element and continues to run through several cycles. The advantage here is that this records the total time, including extraneous elements. He can later decide whether or not these are to be included.

Use of the stop-watch technique requires that employees be observed very closely. Unlike personnel in the factory, office employees have not been accustomed to time study, and the analyst should take extra care to retain their

STOP WATCH TIME STUDY WORK SHEET

Department: Customer records
Date: 12/16
Clerk observed: Cynthia Morris
Position: Posting clerk
Operation: Post change of status
Observer: N. Jones

Description of element	Cycle 1		Cycle 2		Cycle 3		Cycle 4		Cycle 5	
	Elap	Read	Elap	Read	Elap	Read	Elap	Read	Elap	Read
1. Put away completed forms and position new form.	05	05	78	07	66	05	90	06	96	06
1. Review form to verify information shown.	17	12	91	13	78	12	B 304	14	408	12
3. Search for record card.	32	15	107	16	91	13	52	17	C 24	16
4. Enter description on form.	57	25	36	29	A 215	24	78	23	71	20
5. Initial card and put away.	71	14	51	15	74	10	90	12	80	09
6.										
7.										
8.										

Interruptions

Symbol	Description	Elap	Read
A	Answer telephone	59	42
B	Talk to supervisor	38	34
C	Sharpen pencil	51	27
D			
E			

Fig. 2. Suggested form for stop watch study sheet for continuous method.

good will. He should place himself so as not to disrupt personnel in their normal duties, yet be able to observe their operations and the stop watch dial simultaneously.

The analyst must record his observations in an orderly manner. Usually a form will be helpful. Fig. 1 is an observation sheet for the snap-back method. There is space for recording a description of the elements to be timed, unit times obtained for each element during each cycle, and the time finally selected as standard. Fig. 2 is adapted to the requirements of continuous observation and has space for recording unit times. Since extraneous elements may arise, provision for identifying and describing them is included. These may be interruptions for personal time or

STOP WATCH TIME STUDY READINGS

Department: Claims Operation or job: Type form letters

Date: 6/14/57 Clerk: Adams Rating factor: 90%

Step A		Step B	
Watch reading	Elapsed time	Watch reading	Elapsed time
1.75	1.75	19.39	0.68 (Error −0.15)
3.69	1.94	19.80	0.41
5.27	1.58	20.14	0.34
7.89	2.62 (Interruption for question)	20.91	0.77 (Trouble reading data 0.29)
9.52	1.63	21.28	0.37
12.09	2.57 (Correct error 0.54)	21.61	0.33
13.97	1.88	22.04	0.43
15.88	1.91	22.40	0.36
17.15	1.27	22.80	0.40
18.71	1.56	23.15	0.35
Total	18.71		4.44
Less, discarded readings	−2.62		
Adjustments for extraneous elements	−0.54		−0.44
	15.55		4.00

Fig. 3. Stop watch time study readings for two elements, or steps, illustrating the use of the continuous method of stop watch reading. The analyst has noted unusual occurrences which lengthened the time taken, and adjusted his totals for them.

stops for other reasons.

For each element of the cycle, a unit time must be decided on. This could be the arithmetic average. It could be the mode or unit time most frequently encountered. It might be the median time in order of size, or the unit time one-third the way down the list of unit times in ascending order. It could be the lowest or best time value, or the highest or maximum unit time. It is also possible to rely on the observer's judgement—say, the arithmetic average after excluding unit times that seem extreme or contain extraneous elements. Although each organization must determine its own unit time, here is a suggestion of how they might rank in tightness:

Minimum, or lowest, unit time.

Upper quartile.
One-third array.
Mode.
Median.
Selected arithmetic average (excluding extremes).
Arithmetic average.
Maximum, or highest, unit time.

The arithmetic average is easy to understand but provides no incentive or goal. The same is true of the maximum unit time. The upper quartile and upper third of an array provide an incentive factor, or a tighter goal to shoot at. In some cases this may be too tight. The mode, or most frequent, unit time has the advantage of elimi-

(Continued on page 268)

COMPUTATION OF STANDARDS FROM STOP WATCH READINGS

Clerk	Number of items (1)	Total time (2)	Average unit time (3) = (2) ÷ (1)	Rating (per cent) (4)	Adjusted unit time (5) = (3) × (4)	Total adjusted time (6) = (1) × (5)
Step A						
Adams	9	15.55	1.73	90	1.16	10.44
Black	9	13.58	1.51	80	1.21	10.89
Carleton	8	11.94	1.49	85	1.27	10.16
Davis	10	14.91	1.49	80	1.19	11.90
	36					43.39
Standard (6 ÷ 1)						1.21
Step B						
Adams	10	4.00	0.40	90	0.36	3.60
Black	9	4.22	0.47	80	0.38	3.42
Carleton	10	4.02	0.40	85	0.34	3.40
Davis	8	3.29	0.41	80	0.33	2.64
	37					13.06
Standard (6 ÷ 1)						0.35

Fig. 4. After observations of two steps, or elements, were made on four employees in the manner illustrated in Fig. 3, the results were summarized as shown above. An average unit time was computed separately for each employee on each of the two steps, as shown in column 3. These average unit times were then adjusted for the rating (shown in column 4) given by the time study analyst according to his best judgment. The unit times adjusted for rating, or leveling, are shown in column 5. A final standard for each step or element is computed in column 6, which represents the composite of unit times for all four employees, as rated, or levelled, by the analyst.

Annual NOMA Conference

Fred A. Schultz
NOMA President

Walter Emmerling
President Elect

NEW ORLEANS will be the site of the 40th Annual Conference and Exposition of the National Office Management Assn., May 24-27. Conference sessions will be held at the Roosevelt Hotel and the three-day exhibition will be in the Muncipal Auditorium. Robert W. Smith, conference chairman, said that 1200 members are expected to attend.

Technical sessions will begin on Monday afternoon, May 25, with a description of how to motivate office personnel with incentives. The next speaker will tell how office machines can either cure or aggravate office problems depending on how they are used. Monday's sessions close with a talk on how to make the most of your paycheck in order to take advantage of the opportunities offered by our capitalistic system instead of spending your life on an economic treadmill.

Tuesday opens with the subject of communications between employees and their supervisors. The speaker will show why supervisors, who can communicate effectively with their subordinates,

EXHIBITORS AT NOMA CONFERENCE

Addressograph-Multigraph Corp.
American Photocopy Equipment Co.
American Telephone & Telegraph Co.
Art Metal Construction Co.
Bohn Duplicator Co.
W. A. Brown Mfg. Co.
Charles Bruning Co.
B. H. Bunn Co.
Burroughs Corp.
Chart-Pak, Inc.
Cincinnati Time Recorder Co.
Cole Steel Equipment Co.
Copease Corp.
Cummins-Chicago Corp.
DeJur-Amsco Corp.
A. B. Dick Co.
Dictaphone Corp.
Diebold, Inc.
Ditto, Inc.
Eastman Kodak Co.
Ebco Mfg. Co.
Elliott Addressing Machine Co.
Esterbrook Pen Co.
Friden, Inc.
General Binding Corp.
General Fireproofing Co.
Gestetner Duplicator Corp.
Gray Mfg. Co.
Haloid Xerox Inc.
Hamilton Cosco, Inc.
Heyer Corp.
International Business Machines Corp.
John Hancock Mutual Life Insurance Co.
Russell Kelly Office Service
Manpower, Inc.
Master Addresser Co.
Monarch Metal Products, Inc.
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NOMA Conference Program

SUNDAY AFTERNOON, MAY 24

Chapter Officers Council.

SUNDAY EVENING, MAY 24

Chapter Presidents Dinner and Entertainment.

MONDAY MORNING, MAY 25

KEYNOTE ADDRESS: Thomas J. Watson Jr., President, International Business Machines Corp., New York.

Annual Business Meeting.

MONDAY AFTERNOON, MAY 25

BUILDING INCENTIVES: Dr. Alfred J. Cardall, Cardall Associates, Philadelphia.

OFFICE MACHINES—SOLUTION OR PROBLEM?: R. C. Ludlow, RCA Victor Ltd., Montreal.

MAKING THE MOST OF YOUR PAYCHECK: M. J. Flynn, General Electric Co., Atlanta.

TUESDAY MORNING, MAY 26

PROGRESS THROUGH COMMUNICATIONS: Dr. Wesley Wiksell, Louisiana State University, Baton Rouge.

THE ADMINISTRATIVE EXECUTIVES: J. J. MacDonell, Price Waterhouse & Co., Montreal.

WORK MEASUREMENT: Paul Holly, Management Systems, Inc., Chicago.

OUR MANPOWER FUTURE THROUGH 1965: Edward Boettner Jr., State Supervisor, U. S. Dept. of Labor, New Orleans.

TUESDAY EVENING, MAY 26

Annual Banquet and Presentation of Awards.

WEDNESDAY MORNING, MAY 27

A PROGRAM TO INCREASE OFFICE PRODUCTIVITY: Dr. Earl Strong, Pennsylvania State University.

WEDNESDAY AFTERNOON, MAY 27

Annual Luncheon and Presentation of Prizes.

have higher morale in their offices. A concurrent session will indicate where office managers and administrative accountants fit into the different office which is now emerging as a result of automation. Two more concurrent sessions will follow: one on the benefits of work measurement when quality and quantity are compared; the other on white-collar manpower in the years ahead.

There will be only one technical session on May 27. This will show why a program to increase office productivity must be centered around workers and their individual performance. This dual concentration provides closer control of clerical costs and savings through cost reduction.

The equipment exhibits will open at noon on May 25 and remain open until 10 p.m. each day through May 27. As usual, a full program of entertainment is being planned for the wives of registrants. New Orleans offers many varied and colorful points of interest. It is not necessary to be a member of NOMA to attend the conference and exhibits. Complete registration information and preconvention literature is available from the National Office Management Assn., Willow Grove, Pa.

Putting Power In Policy

LESLIE H. MATTHIES, Director, Administrative Research, Ross-Martin Co., Tulsa, Okla.

THE VAGUE, highly intangible, thing we call "policy" can, if pinned down, be a very powerful factor in smoothing out any operation. Clearly stated policies are the very basis of effective administration. Let's consider an example of policy and its application.

People who drive their cars to work, and almost everyone does, are interested in the parking facilities. As soon as a man has any rank in an organization, he wonders: "Do I get a special parking stall?" To some men, this means as much, or more, than a raise in pay!

Our example is a medium-sized company of 1500 employees. When we first looked at the situation, the parking facilities were excellent. But the parking policies were horrible. The majority of the people we talked to were unhappy about them.

"Yes, you certainly do deserve a stall in a good spot!"

"You get a stall in a good spot by favoritism," one man complained. "They're absolutely unfair in giving out stalls."

We looked over the facilities. They were good. There were front-lot stalls, side-lot stalls, and back-lot stalls. Of course, Joe Worker had to park way out in the rear area of the back lot, but there wasn't really too much he could complain about. He only had to walk some 300 feet to reach his clock station where he checked in to work.

Then why should the people be unhappy? Why were things in an uproar as far as the parking policy was concerned? We found there was no policy.

In a few cases top executives had their names put on stalls. In other cases they did not. All the stalls were numbered. If someone knew the man who assigned the stalls, he could get a stall in the front lot, right alongside of the top executives.

The man handling the parking assignments was under pressure from many people. To some extent he was playing politics. Many assignments were made primarily on his whim.

We moved a systems man into this area of confusion. In a few days he developed a proposed parking policy based primarily on organization rank. He also wove in the needs of vendors, visitors, and people applying for jobs. He thought out the whole problem, then he wrote a policy statement for the general manager.

When the general manager looked over this proposal, he made a few changes, but basically he accepted it intact. The policy statement was then published. At first, even though the

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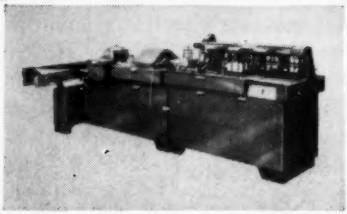

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For More Information Circle No. 474

"Take it up with the general manager and see if he wants to change his policy."

document was signed by the general manager, the man in charge of the parking stalls paid little attention to it.

The company now had fine facilities and a good policy for administering these facilities, but lacked enforcement of its policy. Unrest and unhappiness in the executive group continued. The systems man then made some suggestions on enforcement, the general manager agreed, and the man who had been giving out the parking stalls had this duty taken from him. The systems man took over, temporarily.

He told the boss, "You don't have to have all this bickering if you will put a man in charge who will apply your policy exactly as you have outlined it. I will show this person how, by following a simple procedure and adhering strictly *to the policy line,* the parking problems will end. If you like, I'll administer the policy for a month or two, until you decide on a permanent man."

The guard force of the organization was instructed to strictly enforce the sticker system which was set up to control parking. A man's car had to have the stall number sticker on it before he was allowed to park in a stall. A number of citations were given to violators. Copies of these citations were sent to the department heads, who were asked to explain why their employees were parking where they were not entitled to park.

Many people who had been used to the favoritism approach, followed by the former "parking administrator," tried the same tactics on the systems man. One man told him that he wanted a stall for a man that he was going to appoint as supervisor next week. He wanted the stall now, though.

The systems man said, "I am glad to hear that Mr. Jones is going to be a supervisor. The moment that the personnel form comes through it will be routed to me and I will make up a parking sticker for him, assign a numbered stall, and notify the guard force of his make of automobile. Then they will admit him to that lot." No amount of cajoling affected the systems man. He stuck by the policy.

After a temporary furor, everything subsided. In a couple of weeks everybody admitted that now they had a policy, and it was being administered *fairly*.

The systems man found that the assistant manager's secretary could administer the parking policy. He laid down exact rules for her to follow; rules that implemented the policy, and which were in complete accord with the policy itself.

(Continued on page 267)

For More Information Circle No. 177→

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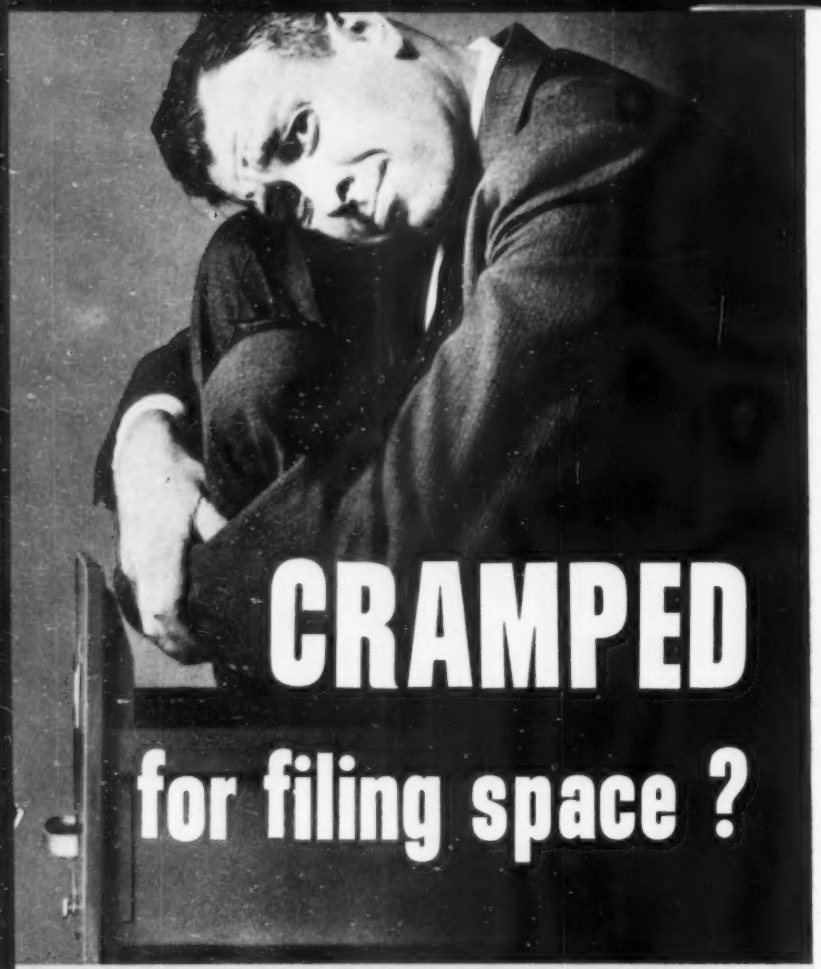

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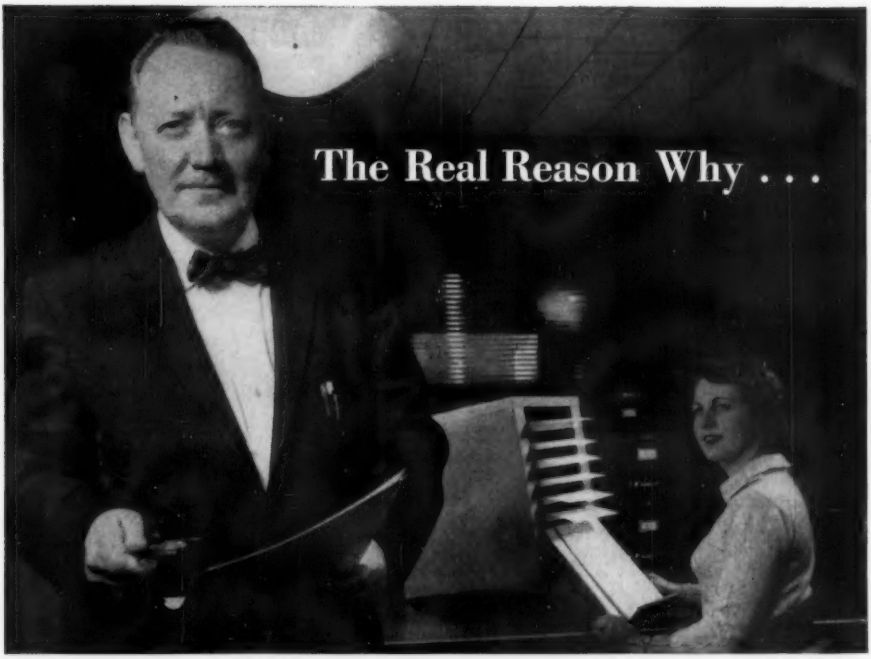

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For More Information Circle No. 272

Use "Word Magic" in Your Personnel Relations

JACK BEDFORD, Professor of Management, Armstrong College, Berkeley, Calif.

THE RIGHT WORD at the *right* time will help you build better human relations in your office. This applies when greeting an office caller, answering a letter, giving instructions to others, or discussing a problem with your boss. But it is easier to make this statement than it is to put it into practice in your day-to-day dealings with people. Here are some ideas you can use—words that will work wonders in building better relations in your office.

You, You, You!

Song writers Robert Mellin and Lotar Olias who penned the lyric for the popular song, "You, You, You," employed word magic in the title. It has natural and universal appeal.

Supervisors can borrow a page from this fundamental principle of human relations and woo others with the powerful words—YOU, YOU, YOU. Subordinates who hear the word "you" know that it means "me." This psychology automatically brings them into the picture and they are more responsive to the ideas and suggestions you make.

Here's a simple little experiment you can try to check and to improve your "you-ability." Describe some work assignment to someone in about seven short sentences. Keep your description specific, but be brief in the way you describe the duty to the other person.

Count the total number of words you have used to describe the assignment you selected for this experiment. Count the total number of times you used the words "you" or "your." Divide this by the total number of words used in the

description. This will give you your "you-ability" score. Ten is considered good.

Now add the word "you" to each of the seven sentences you had in your original description. This may require a change in the sentence, so be sure you keep the same thought as you add a "you" to your sentences. This addition of the word "you" changes the tone of what you said. Your work assignment will now reflect the other person's viewpoint. Word magic will help you get the kind of cooperation you want.

You Can't Overdo It

You may feel that you can use "you" too many times in handling work assignments. When you first start to apply this word magic in your human relations problems, you will be very conscious of the number of times you use it. You may get the idea that you are putting too much emphasis on the "you" idea.

However, you will find that others are not conscious of the strong use of "you" in your instructions. They will develop a cooperative attitude, but will not know exactly why they like you; your word magic will be working for you.

As You Know

These three little words can be real word magic for a supervisor who will put them to work. Everytime you use the expression, "as you know," you give the other person a subtle compliment. You indicate through your word magic that you recognize that the other person has plenty of know-how. Yet, you have an opportunity to repeat instructions or suggestions with extra emphasis.

Regardless of whether or not others had known what you are telling them, they will agree. Vanity enters the picture to help this word magic build better human relations in your office. Your friends and associates go on record as "knowing" because you have used the "as you know" to preface your instructions.

When you use enough "as you knows" in dealing with your associates, you will find they readily accept your idea or instructions. Before long the ideas you have planted with this "as you know" psychology, become *their* ideas.

There are two thoughts to keep in mind in applying this word magic to your relations with others: (1) use the phrase "as you know" to *preface* the point you want to make—not after you have made a complete explanation; (2) do not use this phrase on points which others could not possibly know—keep it for things they *might* or *should* know.

What Is Your Opinion?

One problem you may have in dealing with others is in finding out what their interests and desires are. When you use the word magic, "What is your opinion?", you will be able to draw out their *real* problems and interests. This will pinpoint the other person's problem, and then you can quickly work out a solution for it.

Asking someone else for his opinion is a subtle compliment. It gets away from the thought that you are trying to put something over on him. He believes you are his friend because you asked him for his opinion. Although

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For More Information Circle No. 246

"What is your opinion?" is word magic, it can be a dangerous device. Be sure that the point it is used on is not a subject that will get things off on the wrong track. Another pitfall to avoid is the constant repetition of the same phrase. It is better if the same idea is expressed in other words. For instance, you might ask, "What do you think of this?" or "How do you suppose we should do this?" or "What is your thought on this?"

Yes, and in Addition?

This word magic is employed to smoke out the other person's *real* complaint or gripe. It shows agreement with the other's ideas, but it asks a question which will tend to bring the real reason for the complaint out into the open. It will be strong word magic for you if you get the right inflection into your voice as you ask. *"Yes,* and in addition. . . . ?"

You can put the right emphasis on this phrase if you will state the "yes" part in a positive way. Then, add the "in addition" with a question mark in your voice. Then wait. This pause with an expectant look will encourage your friend to give you more reasons for the complaint. As you listen to the other reasons, you will be able to spot the *real* ones for this complaint.

To make this word magic work best for you, develop the attitude that the first complaint raised is not necessarily the real one. You will be sincere in wanting the other person to continue to give you the "in addition" part of the complaint. It will require a little practice to master this, but it will pay you handsome dividends once you have it down pat.

One important part of the human relations job in an office is to build a spirit of cooperation. You will find your own work is easier and more enjoyable when this is accomplished. "We" is the word magic to develop this spirit. It brings everyone into the act and makes them feel they belong on the team. They will take pride in accomplishment. They will feel they will get a share of the credit for everything accomplished in the office.

We, We, We!

One pitfall in the use of "we" is that it should be used to include everyone, not only a select few. When "we" is used in place of "I" it defeats its purpose as word magic for building better human relations in your office.

How Many Applicants Should I See?

There can be no true selection of personnel without a sufficient choice of candidates. For a laborer, one should choose from about ten applicants; for a factory worker, 10 to 15; for office staff at least 25; for a salesman anywhere between 15 and 150; for an executive up to 200. —*Dr. Robert N. McMurry, McMurry Co., Chicago, at the southern conference of the Controllers Institute of America.*

Determining the Authority and Scope of Systems Personnel

NEIL POLLOCK, Manager, Organization & Methods Dept., Stewarts & Lloyds, Ltd., Birmingham, England

THIS ARTICLE will attempt to answer two questions. How much authority should a systems unit have? To whom should it report?

The problem behind the first question is that of equating authority and responsibility. A line executive's job is to get his work done. If an outside department, such as a systems unit, is given power to tell him how to do his job, but is not held accountable for the results, then he is automatically given a plausible excuse if things go wrong. Yet if the unit has no direct authority, how can it do its job when faced with unreasonable opposition?

Some firms try to overcome this difficulty by giving the systems unit executive responsibility in specific instances and for a limited period. Such action might be defended when a fresh activity is being planned, particularly where new techniques are involved. In such cases, it could be argued that the systems unit must know more about the new routine than anyone else, and it is only appropriate that it should assume final responsibility. However, as the unit has only temporary executive powers, it will presumably have to hand over this responsibility when it reverts to its orthodox role.

But if the principle is admitted that authority and responsibility must be commensurate, it would seem that the role of the systems unit must be advisory. It is on this assumption that this article is based, *i.e.*, it is the unit's duty to convince the appropriate officials that its proposals are not only *acceptable* but *necessary*. Acceptance can spring from several factors. For example, conviction based on logical argument; genuine trust resulting from a past record of good advice; even emotional appeal. The one thing that it should *not* rest on is fear of direct authority because proposals accepted under duress will be carried out with a reluctance that will likely result in their eventual failure.

Accepting this as true, how can the

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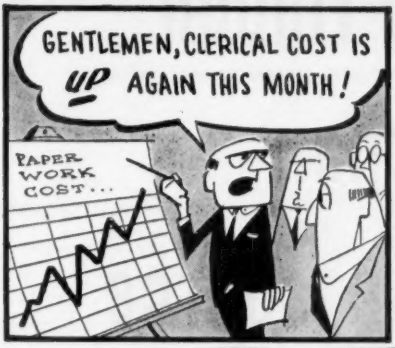

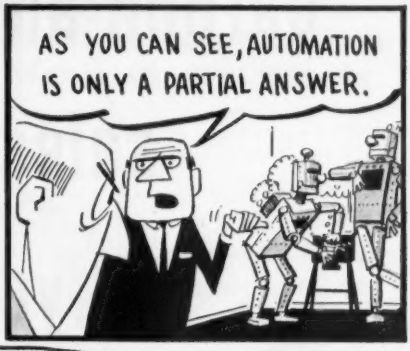

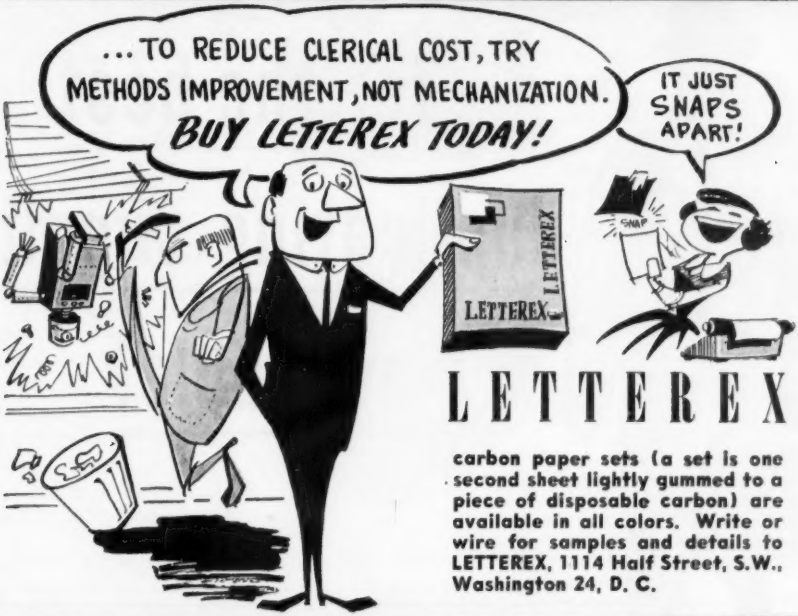

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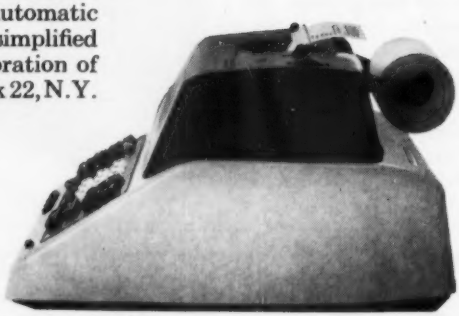

For More Information Circle No. 257

Who has the final word when a department head rejects the good advice of the systems unit?

problem of rejection of, or passive opposition to, good counsel be solved? Last month's article suggested that, while the role of the systems unit may be advisory, it must be set up authoritatively. If it is to have no authority of its own, and yet be effective, it must derive authority by being made responsible to an individual or a body of considerable power.

There is little point in setting up a systems unit if there is *no* final authority to whom it can appeal against the unreasonable rejection of good advice. It is exceedingly frustrating for a systems man to carry out a long and careful assignment, produce sensible proposals, and then find them unwarrantably rejected, or accepted in principle with no resultant action. This is not to say that honest differences of opinion, devoid of sophistry, are to be regarded as unreasonable. The systems unit must expect to find its proposals challenged, and should welcome a sensible defense of current practices.

Therefore, while the role of the systems unit may be advisory, the authority to which it reports should be in a position to make a final decision. The number of such cases to be referred to the authority should be very small, since each is really a criticism of the unit for allowing a problem to get out of hand. Nevertheless, a final "court of appeal" should exist.

The problem behind the second question, that of determining exactly to whom a systems unit should report, depends on the individual company's definition of the unit's precise place in its organization. Opinions on the scope of the systems unit are diverse, and any enterprise that plans setting up such a unit must obviously set some limits on its duties. The Organization & Methods Training Council of Great Britain defines systems personnel as, "Those in industry and commerce who carry out objective and analytical studies to increase effectiveness in organization and administration."

Such a definition places no limits on the level of administration to be studied. Hence, if the unit is to study the *general* effectiveness of the executive machinery, it *must* be an agent of *general management.*

The advantages of such an executive —be he called executive vice president, chief executive, or general manager— is that he has responsibility for general efficiency, but has no large-scale departmental duties.

Of course, if the unit's activities are to be more closely defined, then the need for reporting to *general* management might diminish. If the definition of the unit's objective were, for example, to be limited to reviewing and improving the efficiency of clerical methods, it would be wise to make it responsible to an officer principally concerned with the company's office work. But, if a company considers itself large enough to set up a systems unit, then its problems are likely to be sufficiently diverse to warrant it

Does the work of systems personnel tend to favor certain executives with axes to grind?

being an agent of general management. As a firm grows and divides its activities and responsibilities, each department tends to develop individual objectives, not always consistent with those of its neighbors. The policy most favorable to one is seldom best for all. Conflicting practices arise that can be impartially appraised only by some agency not biased by departmental interest. If such appraisal is to be done by the systems unit, then to make it report to an executive responsible solely for one department may foster the unworthy thought that particular investigations were started only because he had an axe to grind.

Management's intention for the systems unit should be the prime indication as to the office or person to whom it should report. If sight is lost of this intention, the unit's development and usefulness will be hindered and, in extreme cases, stopped entirely.

The internal systems unit has been known to report in a number of ways. In some offices, where it is known as "administrative management," it is a small group reporting directly to the executive vice president. Where the company has a sales executive who is responsible for more than just sales, then the unit reports to him. This is particularly useful where this executive is responsible for profitability and economy. Cases arise where, under one name or another, the unit reports to the chief accountant or treasurer. Such an arrangement is open to criticism on the grounds that production people sometimes view it with suspicion.

In at least one company, the systems unit reports to a select committee of three representing different functions. This avoids a charge of sectional interest, and loading a chief executive with yet another agency. Occasionally it reports to a vice president who has power and influence beyond the particular department for which he is immediately responsible.

To sum up, the following points seem evident:

- A systems unit should play an advisory role and have no direct authority of its own.
- There may occasionally be a case for giving direct authority for a limited objective, especially where a new technique is involved.
- The unit should derive its authority indirectly by reporting to a top executive—preferably general management.
- The existing company set up, the intended role of the unit, and the relative power and enterprise of various executives will be the main factors in determining the precise niche for the unit.

Finally, the personalities, experience, acumen, and acceptability of the systems staff are, in practice, of greater value than any indirect authority however highly placed. The principal objective is to give good advice, to accept the moral sanction implied by an advisory role, and to get such advice willingly translated into action.

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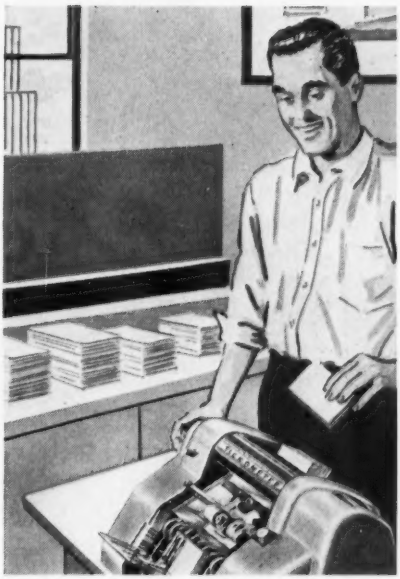

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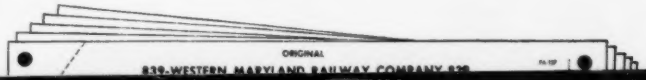
For More Information Circle No. 383

B. E. WYNNE, Controller, Western Maryland Railway Co.

CONTROL AT WESTERN MARYLAND

"Moore forms help our ore trains roll 6 hours sooner"

A new automated system at Western Maryland Railway's Port Covington ore terminal speeds paperwork, cuts copying errors, and reduces five forms to two. In the past, handwritten records of each car's tonnage were carried half a mile to the agent's office, totalled and recopied, and carried more than another mile to designer of the system. The forms are a 5-part Moore Speediflo Waybill and a 2-part Moore Speediflo Statement. They are Western Maryland's control in print.



Now, as the cars are loaded, the weighman records the tonnage on a teletype unit in the loading crane. This simultaneously generates, in the yard office, punched tapes containing variable information about the cars. Combined with constant data tapes, this tape is used to print the Waybill. A complete set of Waybills is handed the conductor minutes after the last car is loaded and coupled in place. At its destination, each car is delivered with the consignee's copies of the Waybill, his 'pre-written receiving memos'.

A by-product tape picks up all data from every Waybill, and is used to prepare the Shipping Statement. This combines on a single form Shipping Notice, Weight Certificate, Freight Bill and Blanket Waybill. Derived from the original tapes, it is certain to be accurate.

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For More Information Circle No. 301

RIGHT or WRONG in Employee Relations

A ROUNDUP of day-to-day employee problems and how they were handled by management. Each incident is taken from a true-life grievance which went to arbitration. Names of some principals have been changed.

Are Seniority Rights the Same for Both Sexes?

What Happened:

The company employed men and women in the same departments. Some tasks were classified as "men's" jobs and others as "female" jobs. However, from time to time, supervisors would assign women to "men's" jobs and vice versa. There were some jobs to which women were never assigned because they were considered unsuitable for female employees. Came a layoff—and a number of women workers were let go. Male employees with less seniority were kept on. The women protested:

1. Seniority doesn't make any distinction between male and female. It should prevail where employees have the ability to perform available work.

2. We have shown our ability to do certain "male" jobs as witness the fact that supervisors used to assign us to them.

3. As women, we have a right to be protected against discrimination. Many of us need jobs and are the sole support of our families.

4. The supervisors now say that these jobs are too hard and unpleasant for us. How come the supervisors didn't think that way before?

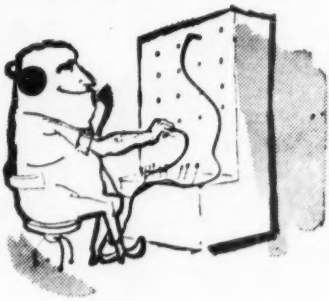
The company answered:

1. Yes, we interchanged men and women on jobs, but when we had a big workforce we could always spare an extra man in case the women got tired. Now that we have to cut our force down, we need men who can handle all the jobs.

2. It's up to management to decide whether or not employees are capable of handling assignments. We say that women cannot handle "men's" jobs. Otherwise, why did we classify certain operations as "male"?

Were the Employees:

RIGHT ☐ **WRONG** ☐



WHAT ARBITRATOR PAUL PRASOW RULED: "So long as the women employees are capable of performing the work reasonably well, they may not be deprived of their seniority rights, even though the jobs are considered too burdensome for women. The basic test is not whether, in the opinion of supervision, the job is burdensome, disagreeable or difficult for women to perform, but rather whether the women have the actual ability or capacity to perform the job reasonably satisfactorily. The company shall reinstate those women employees who are still on layoff and who are reasonably capable of performing jobs being held by men with less seniority."

Is Attitude a Part of Fitness for Promotion?

What Happened:

When a vacancy occurred, John Derio and Charles Bailey filed for promotion. Bailey, the junior man, got the job.

Derio complained. He pointed to the company's promotion policy which said: "In decreasing, increasing, or making replacements in the working forces; seniority, ability and the qualifications of an employee will be given consideration."

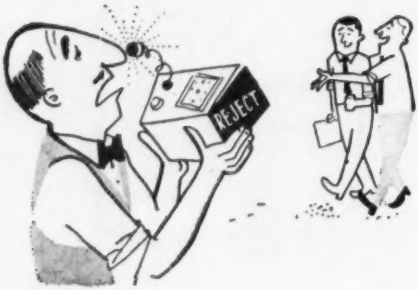
"I have seniority," Derio said, "and I have the ability. I have never received a warning for poor work—or anything else, for that matter."

The company based its decision on the following:

1. In the past, Derio has shown a "bad attitude" and "lack of cooperation." He had several run-ins with his supervisor who said Derio argued and didn't follow instructions easily.

2. The promoted job requires less supervision and more responsibility. Derio is good when closely supervised but he's not qualified for a higher job.

3. How else can we build up a real team if we don't take "attitude" and "cooperation" into consideration in our promotions?



Was the Company:
RIGHT ☐ WRONG ☐

WHAT ARBITRATOR BERTRAM F. WILLCOX RULED: "It is in the field of promotions that a management stands most firmly for its right to pick and choose the one whom it thinks will do the best work. Only in this way can a management build the most efficient staff possible from the human material available. Management asserts that it must have freedom to make its own mistakes, and it must use its own judgment in trying to distinguish between a trouble-maker who might be dangerous with more responsibility; and a constructive rebel. Much was made at the hearing that 'ability' and 'qualifications' do not include a worker's attitude to-

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For More Information Circle No. 348

ward the job or his spirit of cooperation with management. This seems to me insupportable, at least for the word 'qualifications'. Webster's New International Dictionary gives as a definition of qualification: 'that which qualifies; any natural endowment or any acquirement which fits a person for a place, office, or employment.' Derio is not entitled to the promotion."

Must Management Investigate Causes for Infractions?

What Happened:

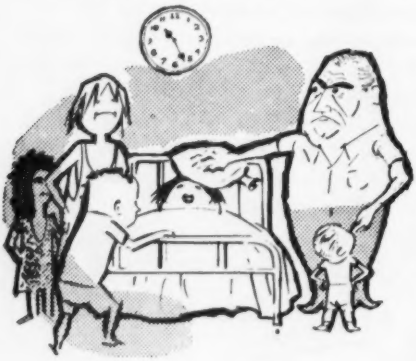
John Meeker, a seven-year employee of average efficiency, began to accumulate a series of absences last year. It seems he was having a lot of family problems. His wife was sick and he had six children, three of whom were not in good health. After ten absences he received a written warning notice. After 38 absences he was given a second notice. The next time he was absent, he was fired. The company had a written rule that any employee who was chronically absent would be warned and, after two such warnings, would be subject to discharge. John protested:

1. I had a lot of troubles and couldn't come to work regularly.

2. I'd like another chance.

The company was impatient with John's argument:

1. We put up with 38 absences.



2. We go by the rules—two warnings and out. That's fair to everybody.

Was the Company:

RIGHT ☐ WRONG ☐

WHAT ARBITRATOR HARRY SELIGSON RULED: "In spite of John Meeker's poor attendance, I am constrained to reverse the company's action in discharging him. There was almost a 'mechanical' carrying out of a rule. Absences were recorded. After the company concluded there were enough, a written warning was handed 'mechanically' to Meeker. On other occasions, when he was talked to about his attendance, he was merely 'told' or 'warned' that he must improve. During this whole period, not once was he called by his supervisor, department head or the personnel department, for a conference to delve into the causes of his absences.

"If the company insists on asserting its right to manage the working force, it must also assume the responsibility—as part of the management function—to find out the causes behind employee deviations from rules before it imposes punitive discipline. Punitive discipline should not be imposed until a reasonable investigation has been made of the causes, and some attempt made to help him solve the problems that are causing the absences." The penalty was reduced to a disciplinary layoff.

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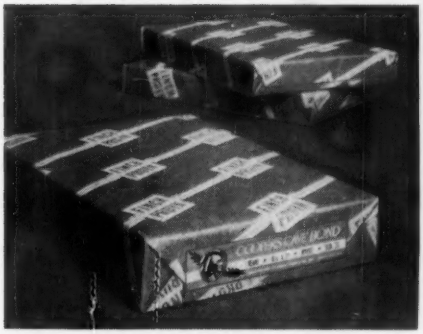

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For More Information Circle No. 327

AUTOMATIC SYSTEMS

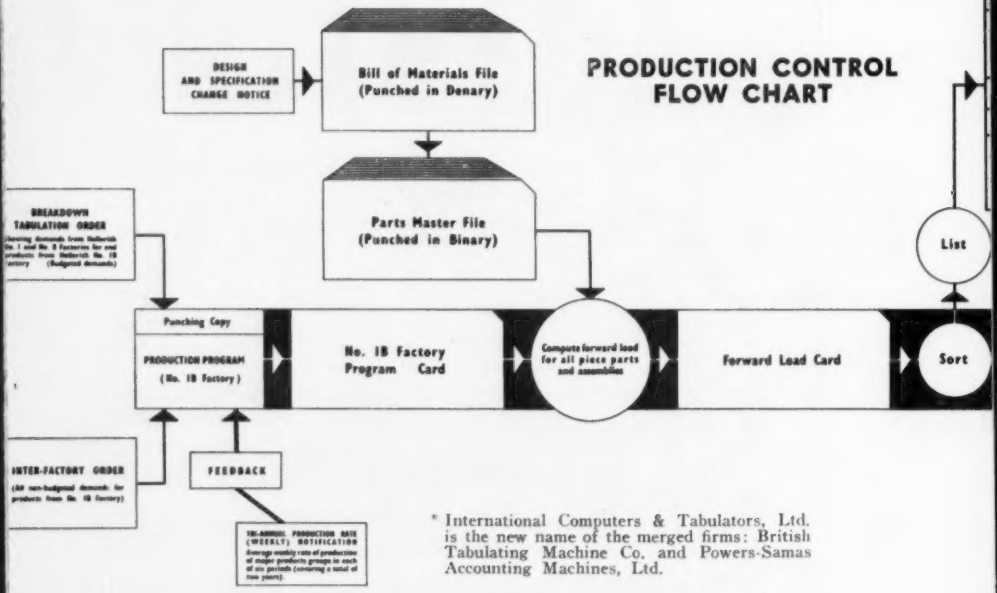
Current trends in office automation including data processing.

Computer Production Control

JOHN GRINDROD

FOR OVER HALF A CENTURY manufacturers of punched card equipment, the production of electronic data processing machines brought many production problems to International Computers & Tabulators, Ltd.* (England). For instance, the company has to produce some 40,000 components a year for one machine and have them in the right quantity at the right place at the right time. To solve this and other problems the company decided to take its own medicine and make use of a computer for organizing production. A Hollerith HEC Type 1201 machine is used.

The company's factories are three separate producers. No. 1, at Letchworth, Herts, makes electromechanical tabulator equipment. A second factory, No. 8, in Northern Ireland, makes ancillary machines such as sorters, collators, summary punches, reproducers, interpreters, etc., of the electromechanical punched card range plus electronic multipliers and calculators, and a new line to supplement and eventually superseded an existing one at the Stevenage factory: HEC Type 1200 computers. The third, factory, known as Factory 1B, makes various types of components for Nos. 1 and 8. Factory 1B is being used as a guinea pig to test the computer system. Approximately 600



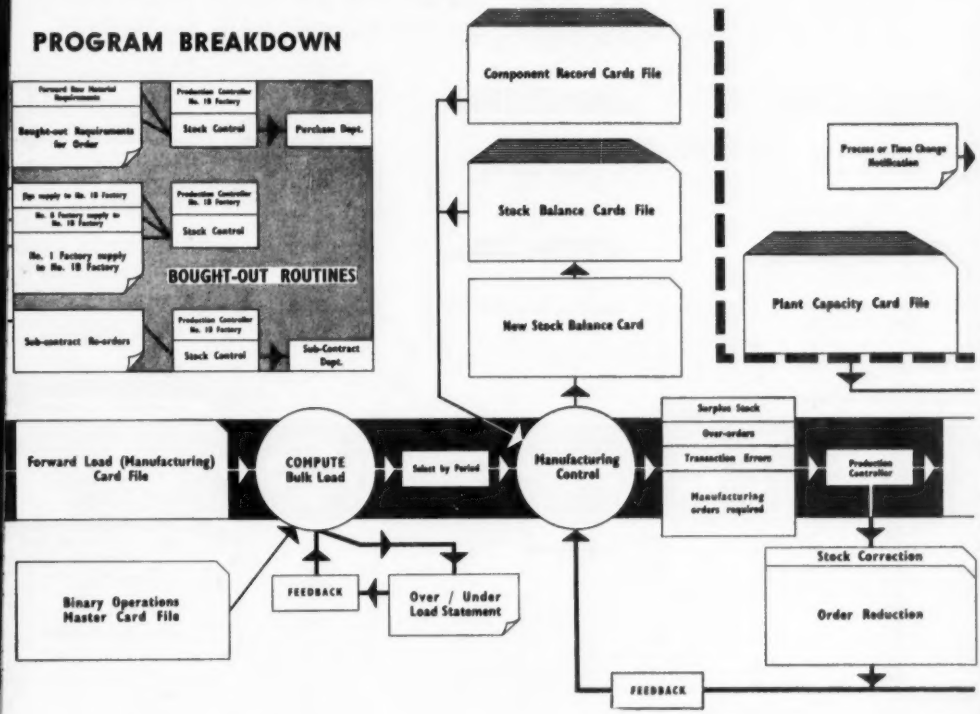
* International Computers & Tabulators, Ltd. is the new name of the merged firms: British Tabulating Machine Co. and Powers-Samas Accounting Machines, Ltd.

different end products are made in Factory 1B.

In applying the computer, the company considered production control under four headings: program breakdown, plant loading, progress control, and stock control.

Program breakdown translates the sales program into end product requirements and translates this into a production plan for manufacture. A card is punched for each end product, identifying it and stating the number of units called for in each of a pre-determined number of periods of time ahead. In this form the information is fed to the computer and stored in specific identifiable locations on a magnetic drum to serve as a multiplier in subsequent calculations.

Records are kept of the unit content of each type of end product. Each component item is identified by a part number and the record shows the number of times it is used in one unit of the end product. This information is used to produce a different form of record showing (under part number) all the different end products in which that item is used with the number of times it is used in each. Cards punched with this constant information form a permanent master card file which, subject to detail modification on a specification change, can be used and reused as often as required for a new



breakdown.

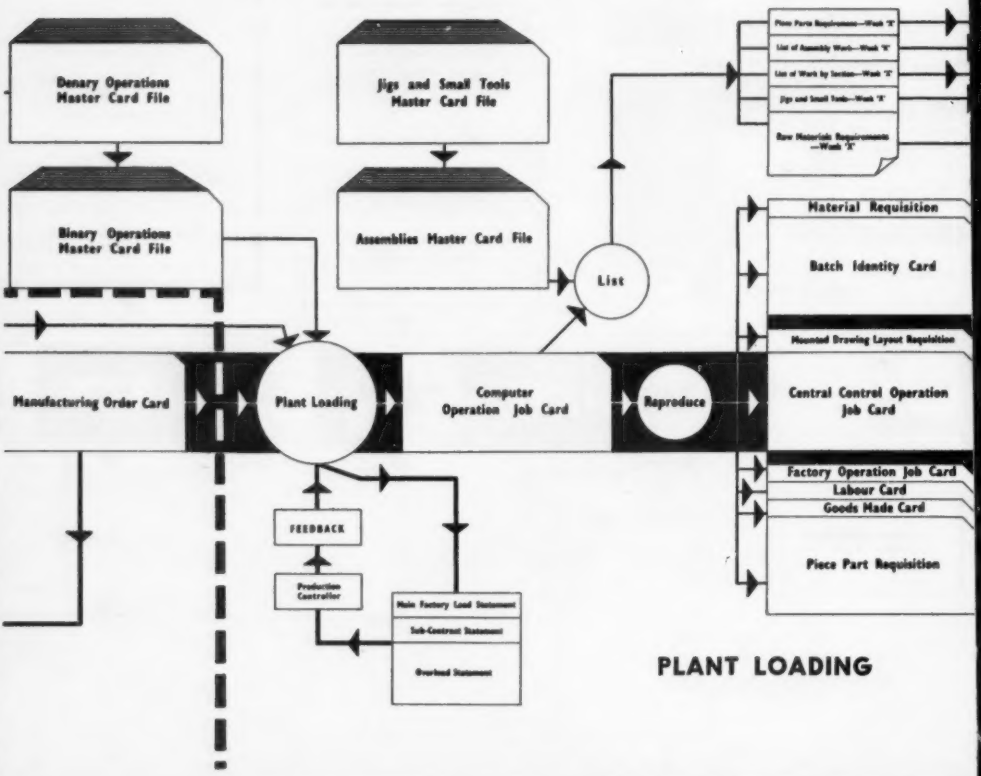
The field layout of the binary part master card, for which both decimal and binary punching is used, is as follows:

COLS.	FIELD	PUNCHING
1- 6	Part number, six digits	Decimal
7- 8	Factory	Decimal
9-10		(Not used)
11-50	Quantity fields	Binary
51-60		(Not used)
61-70	Drum location	Binary
71-76		(Not used)
77-78	Card serial number	Decimal
79	Class of card	Decimal
80	Computer designation	Decimal

In the file of binary part master cards is a permanent record for each item in the parts list, identified by part number. The record also shows which end product each is used in and the quantity in each end product. This information is fed to the computer and related to the information already stored there about the end product and quantity required. By successively multiplying together the paired quantities and accumulating the results, the total requirement of each item (by part number) is obtained.

Since there were already orders for parts outstanding when the system was changed to computer control, such free stocks were deducted from the initial figure obtained by computer to get the net requirement. The computer is programed to test for card serial number and also to test each of the 12 lines on the card, skipping those which are blank.

Plant loading determines the total load of each machine group at any particular manufacturing period and allocates time for specific machines to

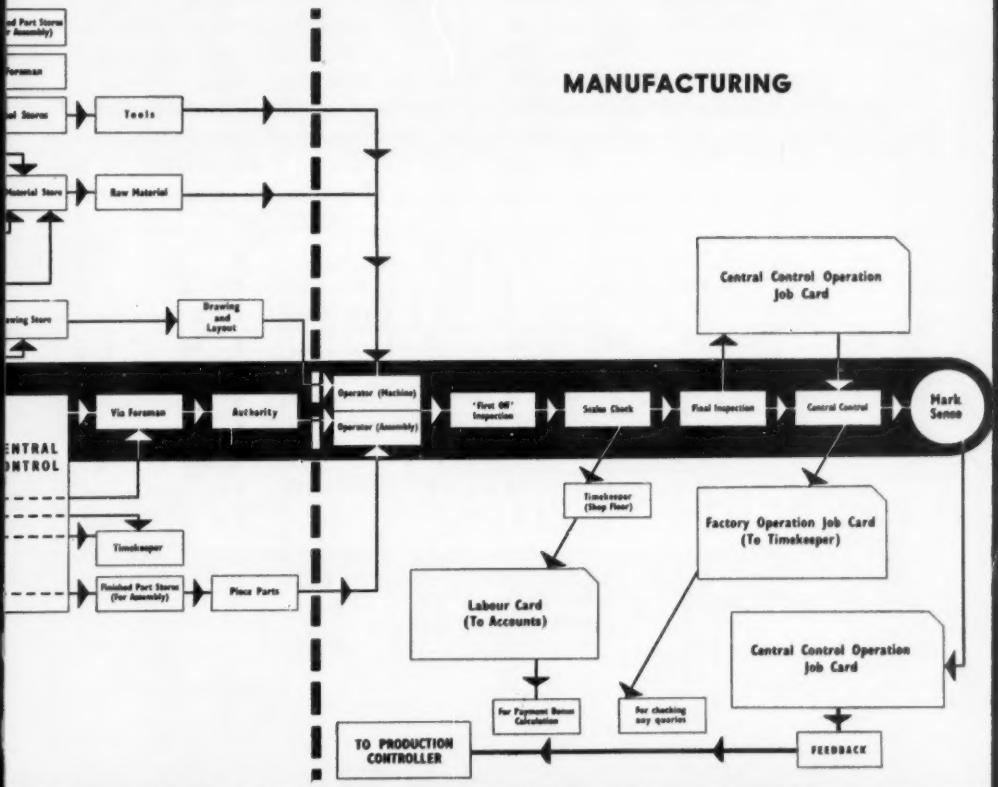


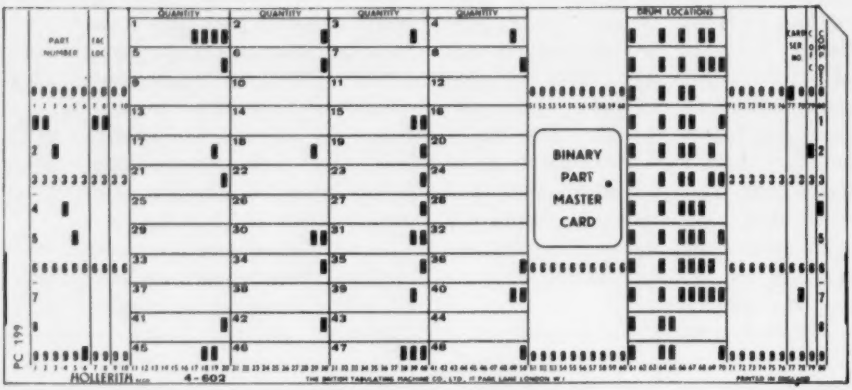
PLANT LOADING

carry out specific operations. As a starting point for the plant loading procedure, the statement of requirements of made-in items taken from the gang punch unit of the computer for the program breakdown is used. This file of punched cards indicates what is to be made, how many are to be made and where they are to be made. It has still to be ascertained, however, in what order they are to be made and when to start making them.

For this purpose, use is made of a file of binary operations master cards, previously set up from existing operation records, which contains, for each operation, within each machine tool or facility group, data as to the number of hours (to the nearest tenth of an hour) required to perform that operation on some quantity of a particular item identified by part number. Here again decimal and binary punching is used: decimal for columns 1-6 for part number; columns 78-80 for serial number, class of card and computer designation; and binary for columns 61-70 relative to 12 individual manufacturing operations, giving operation number, set-up time, minutes each and interval time.

Loading procedure is concerned with the time taken to perform any particular operation on an economical batch. Therefore, on the binary operation master card (or cards), it is necessary to record a correct sequence of operations defining, for each operation: set-up time in hours to the nearest tenth; allowed time for one off; interval time between one operation and the next in sequence. The sum of these is the overall operation time, and the sum of all the



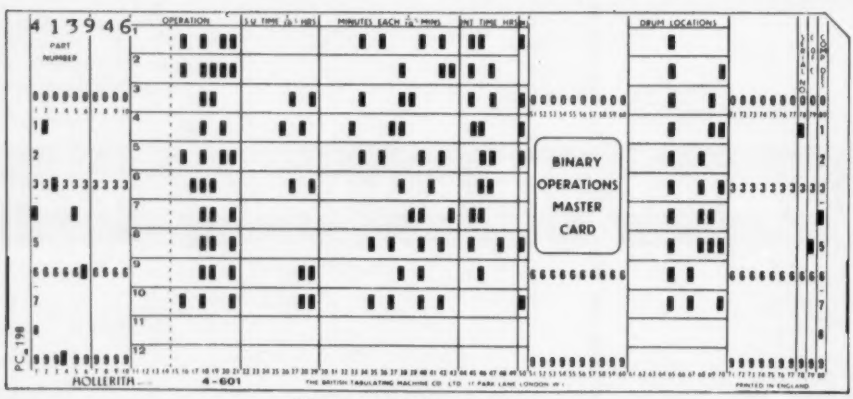


Master card for parts.

overall operation times should be the time required to make an economical batch.

It is now necessary to determine when, in the overall production cycle, each part (or assembly) has to be made, the earliest (when several dates are involved) being the material one. This date determines the finishing date for making the batch of parts concerned.

To begin the procedure, the agreed delivery data for factory 1B's end products is taken with the date on which items must be in the hands of No. 1 or No. 8 factories. This may be ten weeks (the duration of a complete 1B production cycle). Anything exceeding this is specially dealt with. It is determined what components are required for final assembly of the 1B end product and when they will be required. Assuming, for example, that final assembly takes one week, then all items required for final assembly must be in existence 10 — 1 = 9 weeks from the beginning of production period. Continu-



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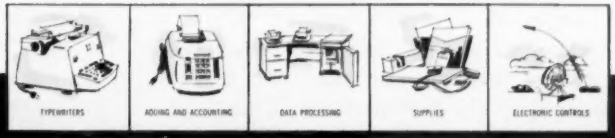
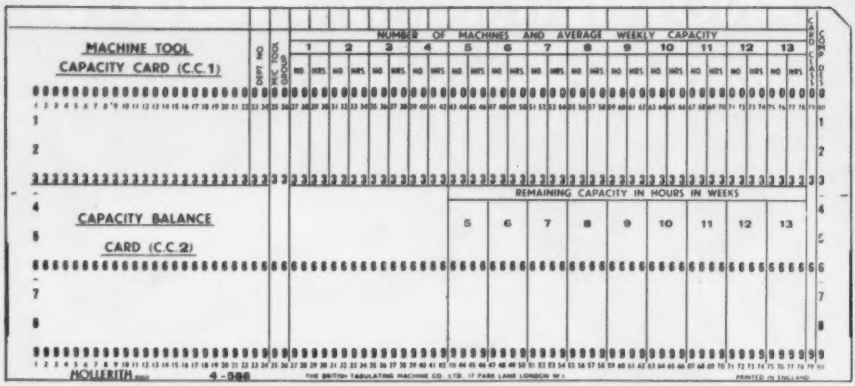


underwood

Business machines and systems to master your paperwork



Machine tool capacity card and capacity balance card.

ing our hypothetical case: part A (making time 1 week), part B (2 weeks) and assembly X (4 weeks), it would be necessary, for the end product containing these, at latest to start the manufacture of part A in the (9 — 1) = 8th week; and part B in the (9 — 2) = 7th week; and the assembly X in the (9 — 4) = 5th week. This goes on for each part or assembly required at the final assembly stage. Assembly X may comprise, for instance, part C (1 week); part D (2 weeks) and assembly Y (2 weeks). Since assembly X must be started in the 5th week, a start must be made on part C in week (5 — 1) = 4; D in week (5 — 2) = 3 and assembly Y in week (5 — 2) = 3.

This analysis is carried to its logical conclusion, establishing on the computer and within factory 1B's ten-week production cycle, the time at which any part or assembly must exist in order to use it in the next production stage.

To impose these conditions on a factory (1B) where machines and facilities were already partly loaded or, in some weeks, fully loaded, a third file of cards is used. This file records the overall capacity and existing load in terms of machine tool groups, the difference between the two representing the time available on such groups during particular weeks of the production cycle.

Having available the three files of cards described, the company uses the computer to calculate the overall load (existing load plus new load) for each machine tool group during each production cycle. From this can be detected whether the added requirement would result in overload anywhere along the line and, if so, where. Temporary overload could probably be dealt with by overtime or sub-contracting; a more permanent state by increasing capacity.

At this stage, the output of the computer comprises a load statement for the guidance of management, showing the load on different shops, sections and machines week by week over the production period, and a statement of tool requirements for the carrying out of

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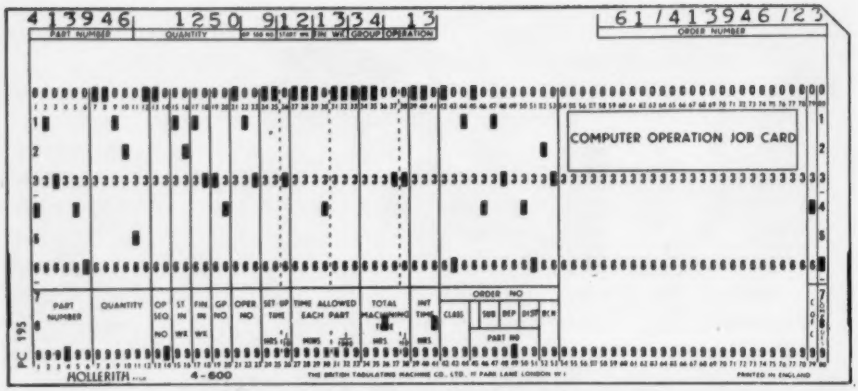


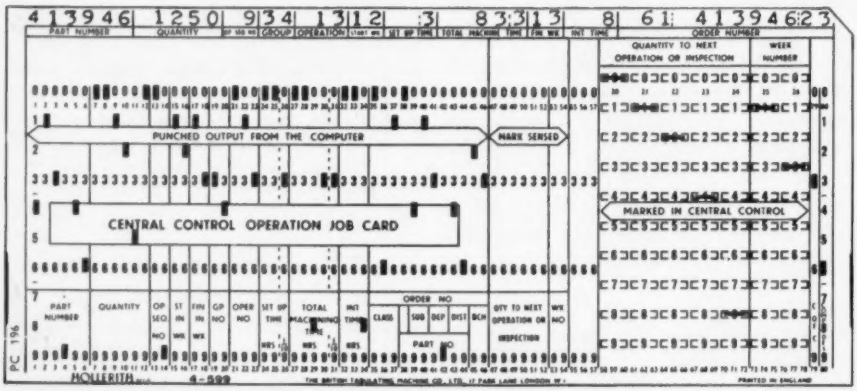
Operation job card used to record each operation.

each operation. In other words, a subsidiary load statement covering only these facilities and operation job cards for each operation on each part or assembly.

It is not necessary or desirable to produce the operation job cards for the whole production period. Only one or two week's cards are needed, as will be seen later.

How far the load statement resembles what actually happens on the shop floor largely depends on precise definition on the operation job card and its accompanying documents of what is to be done, and when, and the effective progressing of the work. Progress control, which is the next stage, measures the actual output against the schedule and makes adjustments in the case of discrepancies. This makes factory and clerical work meet.

To achieve this, week by week orders are issued to the shops in precise terms of what they are to do the following week. These orders include: that section



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Once you try this wonderful new way to dictate you'll never go back to needle-type machines.

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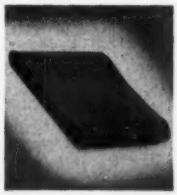

MAGNETIC BELT—mailable, filable, re-usable.

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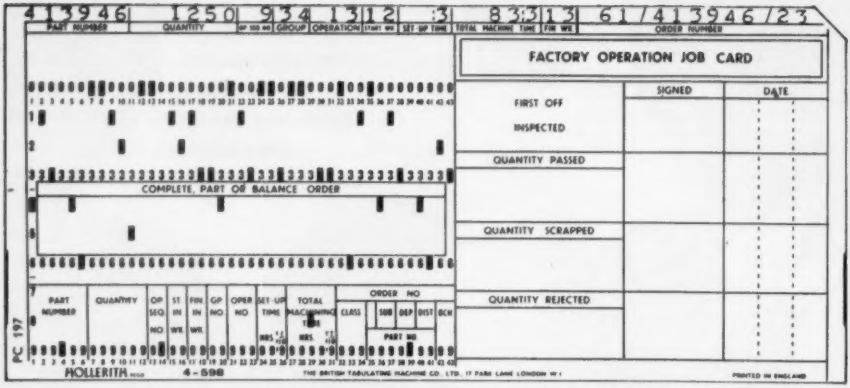
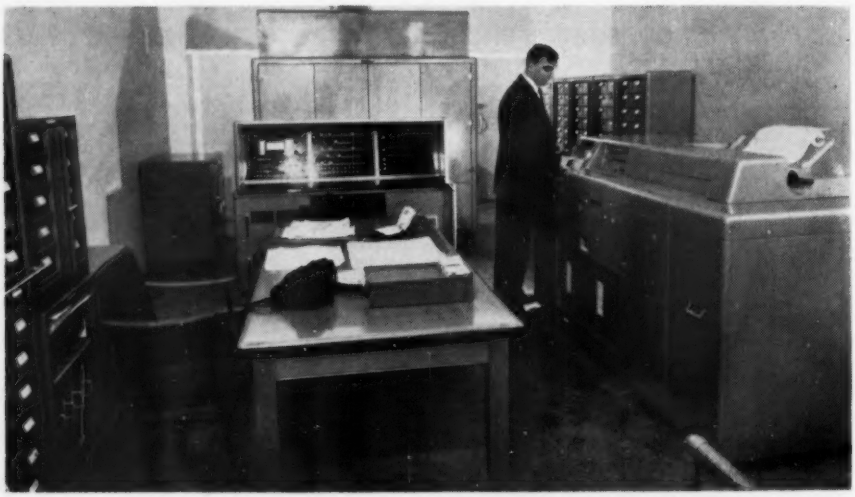


Progress control copies of operation job cards issued to timekeeper and foreman.

of the load statement covering only work to be done next week; operation job cards covering all jobs to be done next week; drawings, layouts, batch label and material requisitions covering all aspects of the job for which the operations job cards are issued. The first three accompany the job throughout its whole course from start to inventory. Shop floor operations are monitored and reported to production management so that comparisons can be drawn between requirement and achievement.

The key to the progress control system is the operations job card, four copies of which are prepared in the

(Continued on page 258)



The Hollerith electronic computer used in the system.

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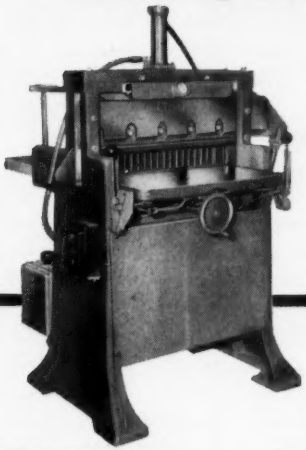

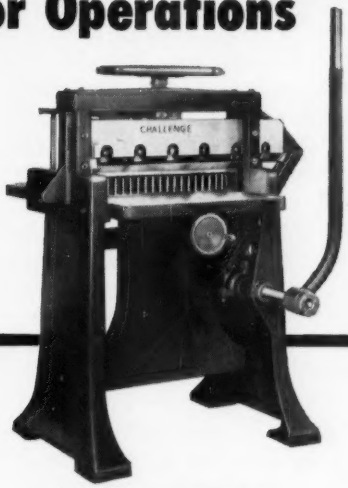

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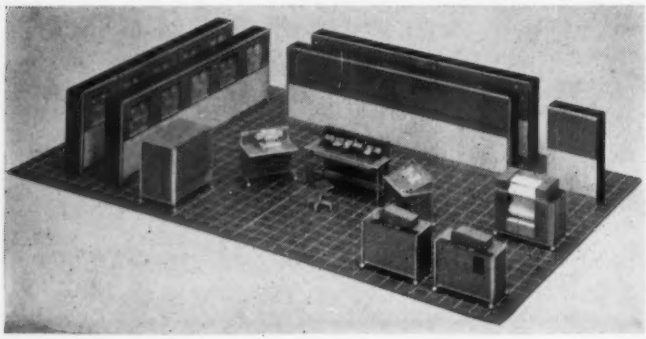
RCA's 501 Computer System

ANNOUNCED BY Radio Corp. of America last January, the fully transistorized RCA 501 Electronic Data Processing System combines advances in solid-state electronics and features specifically designed for business applications. True variable length tape recording, shared time electronics for multiple combinations of simultaneous operations, and building-block modular expansibility are among the design features which have resulted in widespread acceptance for the 501, according to John E. Johnson, manager, marketing department, RCA Electronic Data Processing Division.

Technical advances of the 501 directed to business applications have resulted in what may be the lowest costs in the commercial computer field, from initial lease or purchase, through facilities requirements, to actual operations. A complete all-transistor 501 system may be rented for $11,850 a month. The lease covers a basic five-day, eight-hour shift, and includes maintenance and a wide variety of services by the manufacturer.

This full-functioning, medium-size system includes a complete complement of input and output devices, computer units and magnetic tape files to convert current paperwork load to automatic operations. Typical applications are general accounting, billing, payroll accounting — even providing W-2 form information for employee tax returns, inventory control, etc.

Such an initial system uses eight-channel paper tape and magnetic tape input, handling both alphabetic and numeric data. The paper tape creates an original document and the input to the 501 system in a single, verifiable operation. Tape stations enter data on magnetic tape directly into the system. The basic system comprises a computer, including its program control, operator's console, single unit (16,384 character) high speed magnetic core memory, tape station selection and buffer unit, five high speed magnetic tape stations, 1,000-character-per-second paper tape reader, monitor printer and paper tape punch, and a high speed on-line printer which can produce hard copy at the rate of



An RCA 501 system with eight magnetic tape files; computer power supply, program control, memory, tape selection and buffer unit, electronics cabinet and offline printer; card punch (output), card reader and editor (input), paper tape reader; monitor printer and tape punch.

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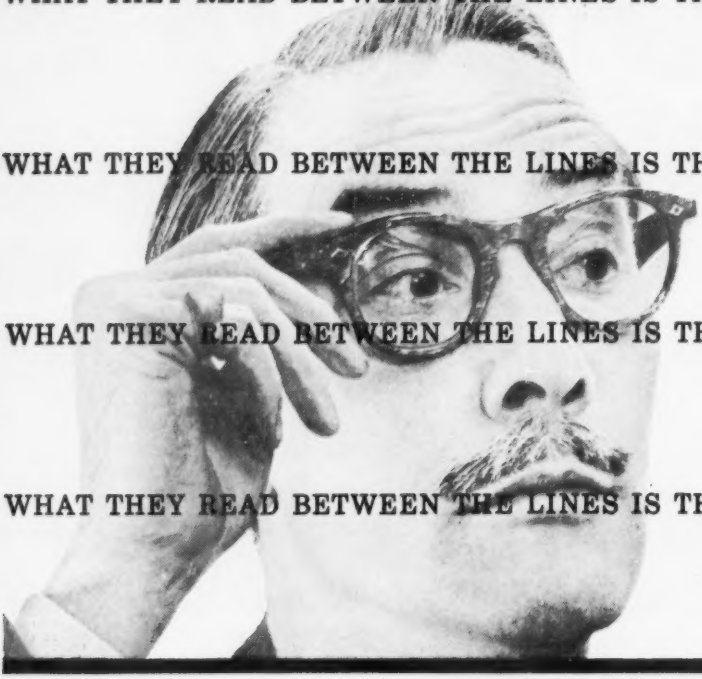

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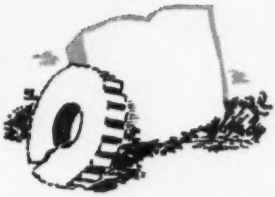
An initial system is readily expansible to match increasing work requirements. As the workload grows or new operations are converted, the system may be expanded by virtual plug-in of additional or new modules. With relatively little change in programing, and without disrupting normal operations, capacity may be enlarged as follows:

High speed magnetic tape stations may be added up to a total of 63, to multiply bulk storage capacity for the records processed. Each tape station can store up to 8½ million characters.

High speed magnetic core memory—the unit in which the computer does most of its work and a key element in electronic processing efficiency — may be expanded to 262,144 characters.

Up to 12 random access storage files with a capacity up to 18 million char-

John L. Burns, RCA president, shows a magnetic core frame used in the memory of the RCA 501 System to Howard G. Petersen (left), president, and Stewart M. Walker, senior vice president, Fidelity-Philadelphia Trust Co.



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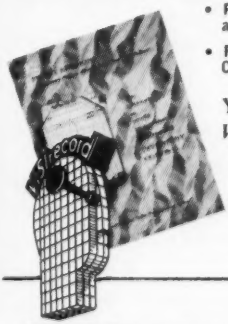

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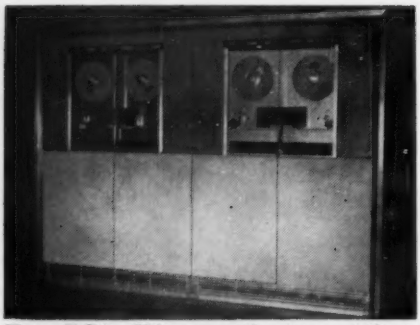

Two RCA 501 magnetic tape stations, which serve as bulk storage files for data processed by the system. Each unit can file over eight inventory transactions per inch on its 2400 ft. of tape.

acters, may be added for processing transactions, received in random order, as they occur.

Punched card input and output units to transfer data either from punch cards to magnetic tape, or from tape to cards, with the option of automatic editing in both.

Conversion of on-line printer to off-line operation, with its own tape station. As many high speed output printers as are needed may be used off-line.

Paper tape output to transfer data from magnetic tape to punched paper tape, for purposes such as wire-line transmission.

The major advance in the RCA 501 contributing to its efficiency and low cost is the complete transistorization of the entire system, including peripheral equipment. As a result, it takes up less space, weighs less, is easier to install, requires a fraction of the power and air conditioning, and is more reliable in operation. Savings in utilities and facilities expenses as a result of transistorization are estimated at 60% of floor-

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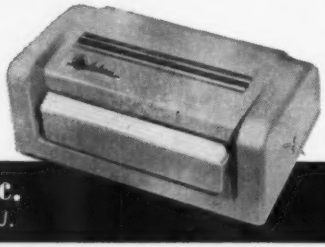

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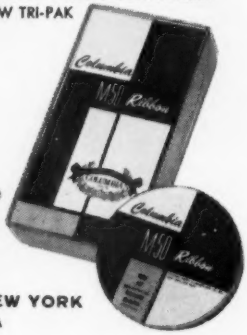

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For More Information Circle No. 259

space, electric power and air conditioning needed by earlier equipment. Operational experience with the 501 has disclosed that the RCA transistors operate dependably over a long period with an extremely low transistor failure rate. Extensive miniaturization, and the use of one standard circuit in plug-in modules for 90% of the system's electronics, also help keep maintenance expenses to a minimum.

Another characteristic of the system is its use of true variable length word organization. The working file used in data processing is magnetic tape. All data is handled in the system consecutively in the form that they come into it. Each message or item does not have to be formed into blocks or units, with zeros or machine characters added, in order to be processed.

The 501 gets its tapes into action twice as fast with a start-stop time of 3.5 thousandths of a second. Combined with the ability of the computer to process the tapes while they are running either forward or backwards, the short tape start-stop time increases efficiency in such operations as filing, sorting, editing, sensing for special reports, and many other operations in addition to arithmetic.

In the case of a specialty steel manufacturer planning to use the 501 for customer billing and inventory control on orders for thousands of items in 50 depots, linked by Teletype, each transaction is entered as it would be on a bookkeeping machine. Regardless of its length and number of items, each transaction follows its predecessor immediately on the magnetic tape. In-

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ventory and customer accounting will be speeded up from a monthly to a daily cycle.

Because of its variable length recording feature, the 501 can automatically, and without special programing, eliminate millions of character spaces in recording on magnetic tape. With less tape used, there is less tape to process, saving hours of computer time daily.

The time-shared electronics feature allows the computer, under control of a stored program of instructions, while processing data to make literally hundreds of thousands of decisions a day, deciding also from its internal instructions whether to perform two things sequentially or do them simultaneously. This ability to perform more than one operation at a time makes the 501 ex-

(Continued on page 259)

The RCA 501 printer types forms at 1200 characters a second. It prints 51 different characters, single or multiple sheet, fanfold; one original plus three carbons, spirit and offset masters.

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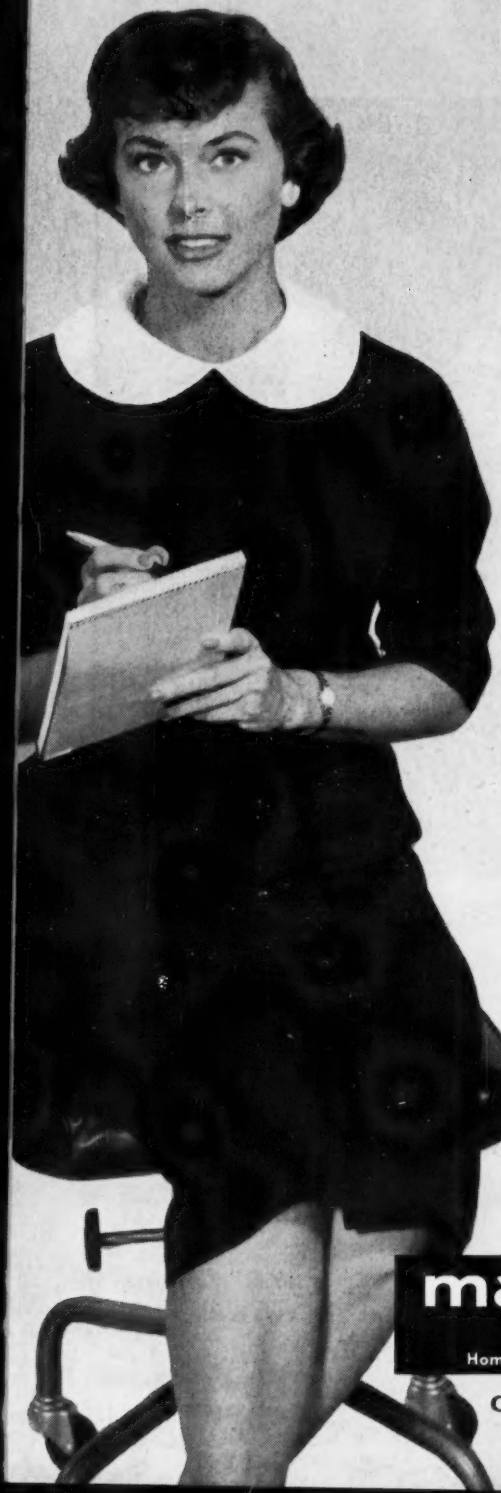

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NEW CONCEPTS IN PRACTICAL OFFICE AUTOMATION

For More Information Circle No. 240

T. D. Shelf Filing

(Continued from page 25)

A time-and-motion analysis of this method indicated that about 2000 manhours would be required to pull each folder partially from its shelf position and insert the single sheet or stapled group of sheets into the folder. This was awkward, requiring two hands for insertion. It was also true that we did not have space in the file-room for 100 girls to be working at one time. On the basis of 2000 manhours it would have required 100 girls to work two ten-hour days to complete the transfer of 150,000 items in one weekend.

Our next thought was to find a working area of such size that 1000 piles could be laid out simultaneously, have the girls walk-and-sort to these 1000 piles, and then insert each pile in its appropriate folder and finally install the folders in the shelves. A trial run of this was made one evening by the author and two assistants. Two basic disadvantages were found. First, to get space for 1000 piles, we would have required 100 desks with ten piles per desk. Desk tops were our only available working surface. Second, the physical area required for 100 desks was so great that the walking performed by the sorting girls would be in excess of 200 miles.

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This idea was discarded but a variation of it was adopted. One thousand corrugated boxes (10″ deep, 9″ wide and 4″ high and open on one 4″ x 9″ end) were obtained. Since these boxes were open on the end, they were stacked one on top another and the sheets inserted into the open ends, like using pigeonholes.

The boxes were purchased at a cost of $60 and assembled in stacks five boxes high and five stacks wide to produce units of 25. Each unit was as wide as a desk top and half the width of a desk. This enabled us to place two units back-to-back on each four desks which were placed end-to-end. The arrangement gave us 100 compartments along a row of four desks. Five rows of desks holding ten rows of boxes gave us the required 1000 compartments in a comparatively small area.

It was necessary to number each box in the terminal digit sequence 000 to 999. We used a duplicate set of the guides from the shelf files, inserting one in each of the boxes. This additional set of guides with the numbers in a different color from the set installed in the shelf files was used later in the shelf files to separate the various series of items filed.

A preliminary test run was made and indicated that one person could sort 1000 numbers into the boxes, transfer the sorted items into folders and transport the folders to the shelf files in about 80 minutes. On this basis we assumed that 20 sorters could handle 1000 numbers every four minutes, so we arranged for 20 sorting girls to be available one Saturday morning. In addition we used two men for the

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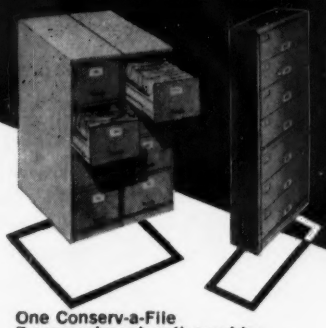

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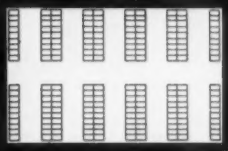

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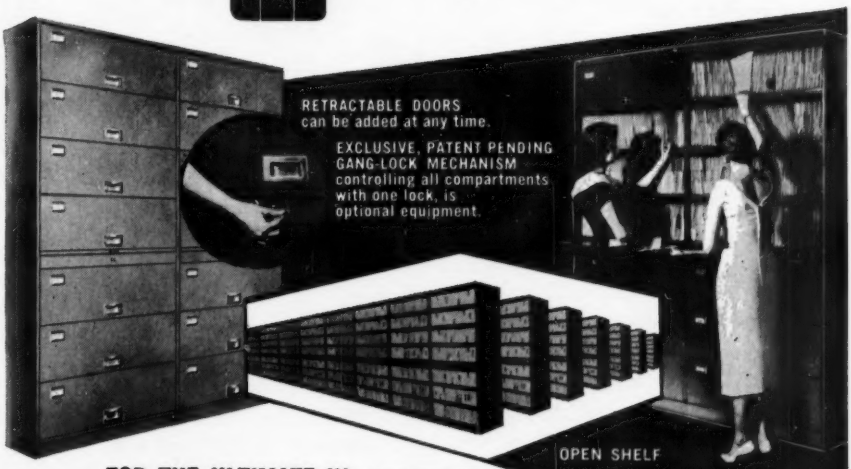

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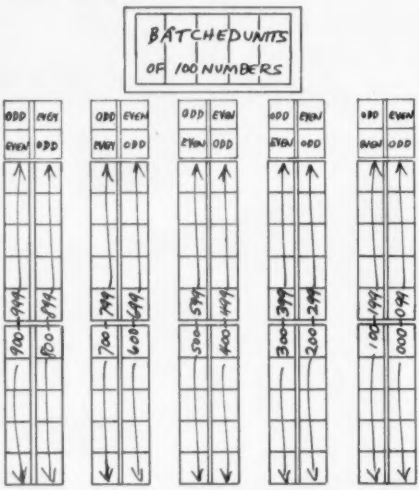
movement of the material and two additional girls to pull folders from the old file drawers.

Two long tables were set up at the end of the rows of boxes. On the tables, one of the men kept a constant supply of file drawers, starting with the lowest number in the series and continuing to the highest. Two girls removed folders covering 100 numbers from these drawers and laid them on an adjacent table. One man took these batches of folders to the proper row of boxes. This eliminated a good deal of walking on the part of the sorting girls and guaranteed that they received their material in proper sequence.



We needed 20 girls to complete the sorting of 150,000 items in about one day. For reasons concerned with the distribution of numbers in the old cabinets, we had to work with 100 numbers in a group instead of 50 which the use of 20 girls would indicate. We therefore had to have two girls work each same 100 boxes. This was done by

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requiring one girl to work the even-numbered thousands and the second girl to work the odd-numbered thousands. To avoid confusion on this point, two open boxes were placed at the end of each bank of 100 sorting boxes. One of these boxes was marked "even" and the other "odd."

The man delivering the material to the sorting girls placed the material in the appropriate box. The girls, meanwhile, had been instructed to each work from the box assigned to her, either even or odd, but never both. They were instructed never to pass each other in the sorting operation since this would have resulted in misfiling all subsequent items. This procedure was followed throughout the operation which, after a preliminary adjustment period, proceeded relatively smoothly.

As before, the operation could proceed no faster than the slowest girl because, if any change were made in the sequence, all subsequent items would be misfiled. This presented a grave problem since the faster girls became annoyed at the slow pace imposed upon them by the slower girls. We were fortunate to have started out with one spare sorting girl and she was used as a floater; however, this did not give us sufficient flexibility. We then noticed that some girls found the operation very simple and so we assigned to each of these faster girls a full 100 numbers or boxes. We found that two of them could maintain that pace so their partners were reassigned to assist the slower pairs of girls in the handling of their 100 boxes.

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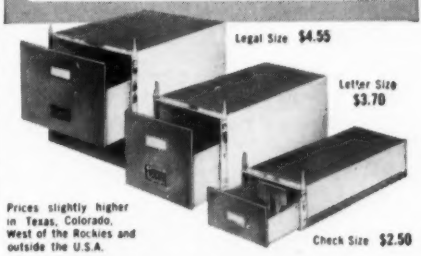

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For More Information Circle No. 470

had two lines with one girl handling 100 boxes, five lines with two girls handling 100 boxes and three lines with three girls handling 100 boxes. Since the workload in each line was identical, we had two cases where one girl was doing exactly as much work as three of her co-workers—a very high ratio considering that all the girls were normally engaged in similar jobs.

The transfer of the 150,000 items was completed in 10½ hours with 25 workers. These 275 manhours exceeded our original calculation of 220, but represented substantial saving over our first estimate of 2000 hours.

On the following weekend the remaining series of 130,000 items were transferred in the same fashion. For the second series 23 workers were available and the transfer required 230 manhours.

In summary, 65,000 individually numbered file folders and 280,000 loose and numbered items were sorted from consecutive numeric to terminal digit sequence and transferred from conventional four-drawer file cabinets to shelf files in a single handling operation on three separate weekends with no disruption of the normal office routine during the intervening work days. The problem was unusual in that three separate filing systems were consolidated into one single shelf filing sequence and, in addition, that of the original three series, two were filed in multiple numbers in the same folder. The transition was completed with the disposal of the miscellaneous items that accumulated during the transition and the installation is now producing the expected economies and efficiencies.

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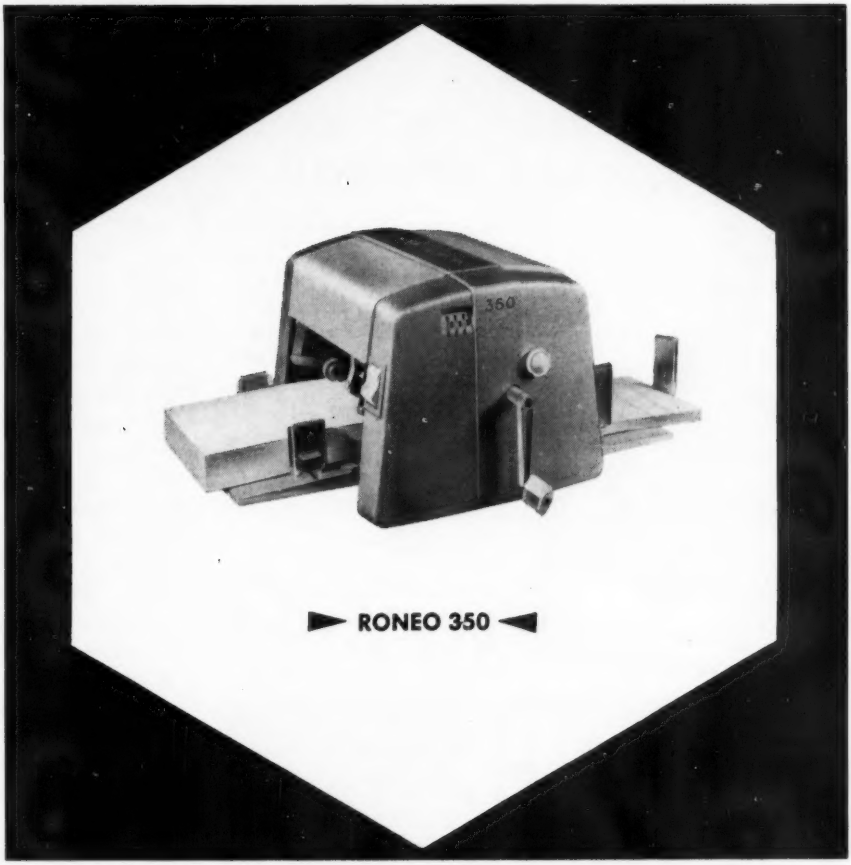

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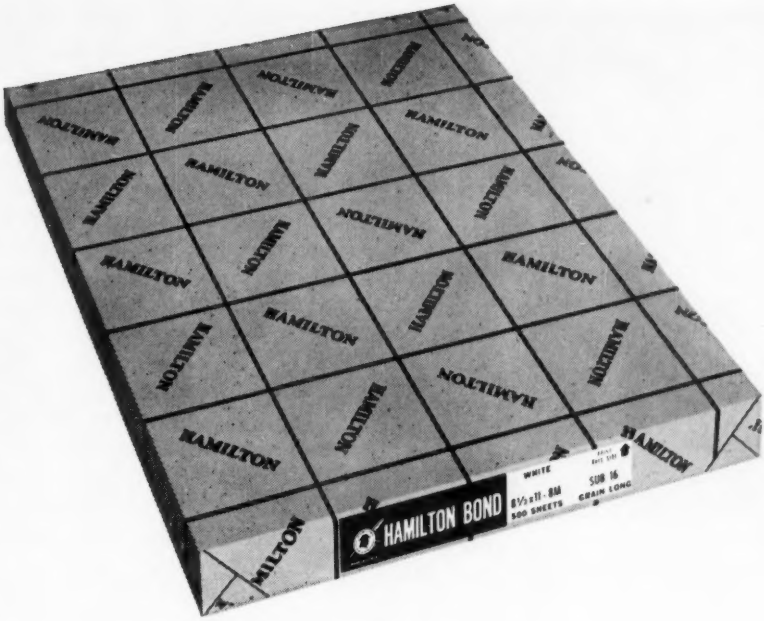

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For More Information Circle No. 306

partment and one by the billing department for invoicing.

This method had several disadvantages. Departmental routing of the customer's order and the two multiple forms complicated order handling and invoicing. Shortage of writing space in the original order often prohibited adequate editing. Because orders could have originated from any one of several departments, changes in, or questions about, orders were difficult and time-consuming to handle. The company took two steps to eliminate these problems:

1. Personnel previously concerned with handling orders for parts and charts in various departments were moved to one central location.

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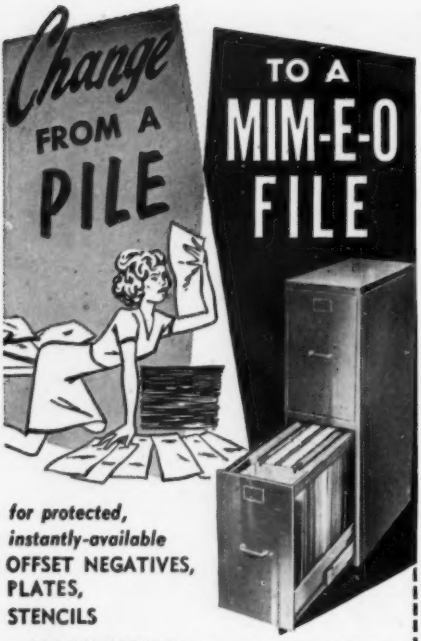

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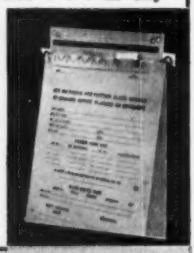

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of each sheet of paper is perforated. The duplicated order copies and their functions are:

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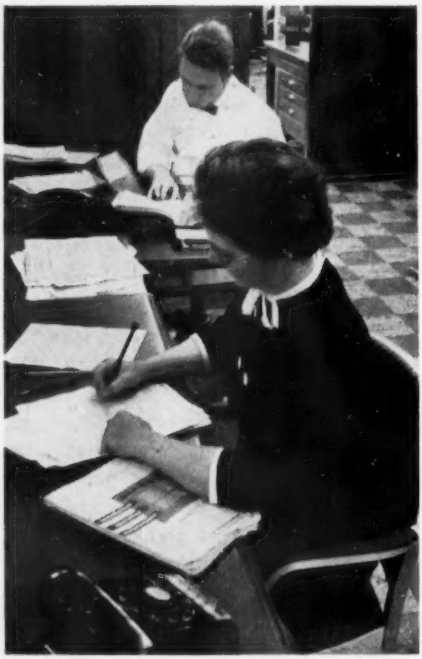
2. Pricing copy which goes to the pricing clerk who adds prices and enters taxes calculated from information on the original order. This copy



After tax information is added and credit cleared, an order number is assigned and the order is edited for correct parts numbers and terminology.

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The order is typed on a duplicating master and enough copies are produced to register, price, pick and ship the order. Master is then filed to await order's shipment.

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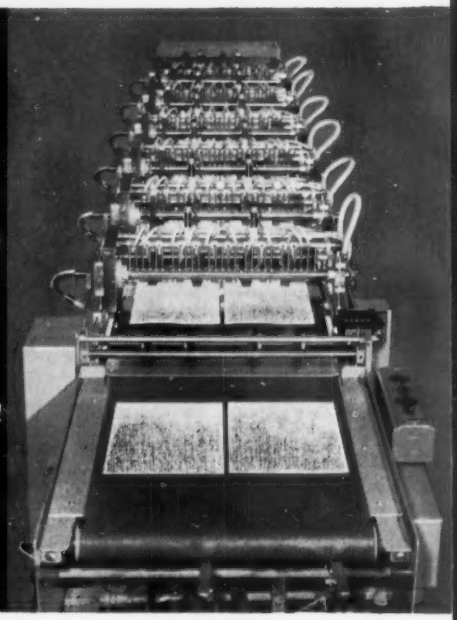

Dual-Stream Speed-Klect Model No. 61-11, covered by U. S. Patent No's. 2,568,224 and 2,846,214. Other patents pending.

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For More Information Circle No. 293

Clip for information on this and other Speed-Klect models. DEPT. TO-5

☐ Please send brochure and full information

☐ Please send the 11-minute, 16mm color, sound film "Speed-Klect in Action."

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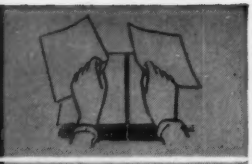
SORT *Faster*



COUNT *Faster*

POST *Faster*

WITH SORTKWIK®

The non-allergenic fingertip preparation

Eliminates irritating rubber fingers... messy, unsanitary sponges

Easy to use—just apply to fingertips for greaseless, stainless, tacky film. Pick up papers easily, quickly.

Non-drying—contains no drying alcohol.

Non-allergenic—Recommended by dermatologists.

Long-lasting—attracts moisture to fingers, making one application long lasting.

Widely used—Thousands of businesses speed up sorting, counting, filing, posting with SORTKWIK.

Your Stationer has SORTKWIK or will stock it for you. Only 50c each.

Find out why SORTKWIK is a regular office supply item in so many businesses. Your stationer has SORTKWIK or will stock it for you. Only 50c each.

FOR TRIAL OFFER send $1.00 for two regular size containers of SORTKWIK.

LEE PRODUCTS COMPANY

Dept. O-5, 2736 Lyndale Ave. So., Minneapolis 8, Minn.

For More Information Circle No. 290

remainder of the sheet is the packing slip.

5. Shipped copy. When the order has been shipped, the shipping department enters the quantity shipped, shipping date, transportation information, and shipping charge if available. The shipped copy is returned to the parts and charts order department where it is used to enter the shipped date, against the date it went to the factory, in the ship book. The shipped copy is matched with the filed master and the pricing copy and is then given to the invoice clerk.

By means of a Computyper, the invoice clerk completes the duplicating master for invoice purposes. From the pricing copy she gets price and tax information. From the shipped copy she gets the quantity shipped, transportation weight and shipping date. She computes shipping charges, adds an invoice date and number, and sends the completed master to the invoice duplicator operator who duplicates invoice copies on 8½″ x 7½″ white paper.

Duplicated invoice copies and their functions are:

1. Customer's copies. Four, or more if the customer desires, are duplicated to invoice the customer. These are sent directly to the customer by the parts and charts order department.

2. Accounting copy sent to accounts receivable as notification that the customer has been invoiced. If transportation charges are to be billed later, an additional copy is duplicated for the billing department. When transportation charges are received, the billing department passes them along to the customer.

DRAMATICALLY NEW

MARK II

Contouramatic

PHOTOCOPIER

THE *White Glove* PHOTOCOPIER

Cleanest, fastest, best-performing, best-looking photocopy machine ever . . . and the best dollar value!

Dramatically new—the most advanced photocopy machine ever developed. Copies *any* mark on paper, works as fast as your hands can move. Costs less to own, less to use!

Look! Processing fluid is completely sealed—never touches your fingers! New exclusive disposable "Seal-Pak" gives true photographic quality with "white glove" cleanliness!

FREE BOOK
"115 Ways A Photocopy Machine Can Save You Money."
Write today!

DISPOSABLE "SEAL-PAK"

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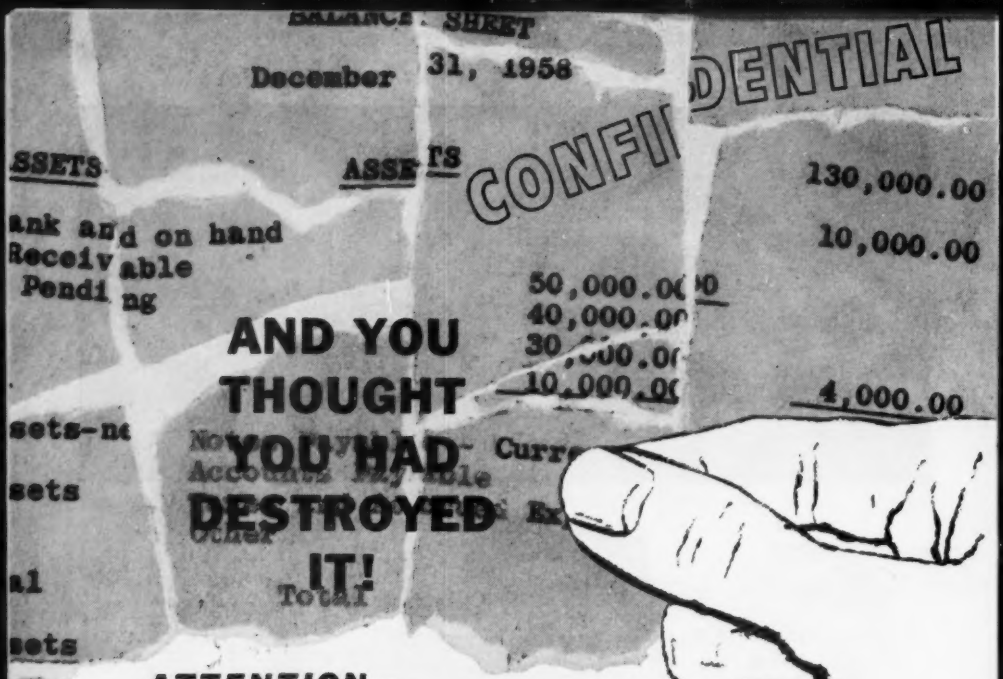
F. G. LUDWIG, INC. • MANUFACTURERS OF PHOTOCOPY EQUIPMENT

508 COULTER PLACE, OLD SAYBROOK, CONN.

For More Information Circle No. 469



ATTENTION –
Office Manager

There's one quick, effective way to destroy confidential papers and obsolete records instantly – in your own office – with no possible chance that anyone can reconstruct them.

The new Shredmaster Bantam 10 is as unobtrusive as your office typewriter. Anyone can operate it . . . just drop papers in and unreadable shreds come out. Safe, clean, quiet, trouble-free. You can use the sheds as packing material.

Put a Bantam 10 in every office where papers should be destroyed to protect personal privacy and company secrets.

FREE: Illustrated descriptive folder with details of 10 Day Free Trial. Just write today to:
75 Varick Street, New York 13, N. Y., Room 1410
Ask for Circular 70

For quick, effective destruction of
Personnel Records
Sales Files
Engineering Drawings
Financial Reports
Estimates
and Proposals

Shredmaster Bantam 10 — the lowest-priced shredder on the market. Quickly pays for itself.

The **SHREDMASTER** Corporation
A DIVISION OF SELF WINDING CLOCK COMPANY, INC.

Manufacturers of the Clipper 14, only heavier duty shredding machine suitable for office use.

Sales and Service in principal cities in U. S. and Canada.

For More Information Circle No. 335

Using data on copies returned from order processing stations, the master is completed on a Computyper and then used to duplicate invoice copies.

3. Copy for sales analysis.
4. Completed file copy held by the parts and charts order department in its completed file to answer inquiries.
5. File copy attached to the original order and sent to the completed file.

THE

ROL-RACK

FIVE FEET OF SHELF SPACE

Used By Thousands of Industries, Schools, Libraries, etc. U. S. Govt.

STURDY & DURABLE

Choice selected 1¼" maple. Sloping shelves angled for title reading, doweled and bolted to assure durability. Side-riveted swivel casters by Bassick with resilient rubber tires. Rolls smoothly with a full load.

Walnut Finish or Natural Wood Finish

32" long, 13" deep, 31" high.
14" between shelves

CATSKILL CRAFTSMEN, INC.

Grolier Building
575 Lexington Ave., New York 22, N. Y.

ATTENTION

It's here—a mobile office unit—New, Functional.
o o o It rolls o o o

$49.50

F.O.B. Factory
Stamford, N. Y.
Weight 49 Lbs.

A Subsidiary of The Grolier Society, Inc. Publishers of The Book of Knowledge and Encyclopedia Americana.

For More Information Circle No. 460

The world of letters relies on

Olympia

PRECISION TYPEWRITERS

. . . to do the job—
easier, faster, finer!

Olympia precision typewriters—standard and portable—are preferred the world over for their quality, value and ease of operation.

Fully-equipped with the most advanced and worthwhile typing features, an Olympia turns out the most exacting assignments easily . . . with crisp—uniform—and distinctive results.

With over 50 years of manufacturing experience, every machine is precision-built to the highest standards—assuring quiet, consistent, trouble-free performance year after year.

Olympia

Authorized Sales & Service the World Over

OLYMPIA DIVISION
Inter-Continental Trading Corporation
90 West Street • New York 6, New York

For More Information Circle No. 266

NOW . . . ANYONE can do PROFESSIONAL QUALITY PLASTIC BINDING!

with these **HAND-OPERATED**

PLASTICO

PUNCHING & BINDING UNITS

Model 24 Punching Unit

Precision-punches pages fast and easy with powerful SHEARING ACTION!

Model 24 Binding Unit

Just insert cover and pages . . . pull lever . . it's PLASTICO-BOUND!

SO EASY, SO SMART, SO QUICK!

Two simple operations complete a PLASTICO BINDING *in minutes!* Precision machines guarantee professional results. And these *easy-to-operate* machines cost so little they soon pay for themselves—save you money from then on in. Catalogs, brochures, manuals, financial reports, price lists and many other items are all easily bound for a long life of service.

Exclusive **ARCH DESIGN** for added strength and beauty

A FEW PROFITABLE TERRITORIES OPEN for live-wire distributors.

Punching and Binding Machine sales create continuous repeat-profits on plastic binding elements. Write on your business letterhead for full details.

P.S. We also manufacture power equipment.

For More Information Circle No. 195

PLASTIC BINDING CORPORATION

Originators of Plastic Binding in America

732 Sherman St., Chicago 5, Ill. • 15 West 24th St., New York 10, N. Y.

FREE BOOKLET

PLASTIC BINDING CORPORATION
Dept. O 732 Sherman St., Chicago, 5 Illinois

Please rush FREE BOOKLET giving me full information about the new PLASTICO Hand-Operated Punching and Binding Units for office use.

Name _____ *Title* _____

Firm _____

Address _____

City _____ *Zone* ___ *State* _____

SMEAD FILING SUPPLIES for MODERN BUSINESS

WHETHER YOU FILE . . . Alphabetically, Numerically, Geographically, Chronologically, or by Subject Indexing, THERE IS A SMEAD SYSTEM ALREADY TAILORED TO FIT YOUR NEED. See your stationer. He will be happy to discuss your problems with you.

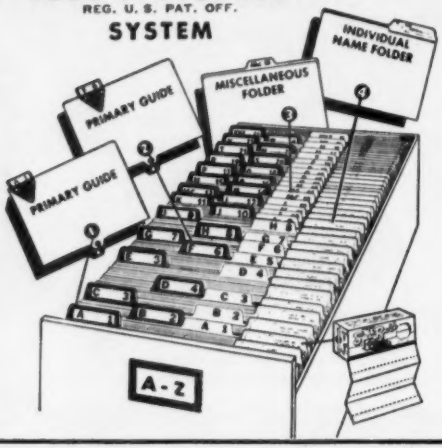
SMEAD TELL-I-VISION INDEX

By using Smead's Tell-I-Vision filing system, you can reduce filing time. The alphabetical-color signal system for finding—and the numerical-color signal system for replacing—make filing easy, fast, and accurate.

SMEAD'S TWO-PLI-TOP FILE FOLDER

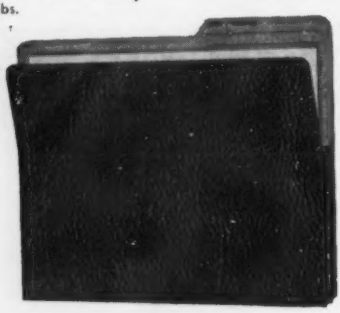
Made doubly thick at the points of greatest wear. Ask for sample.

SMEAD'S TELL-I-VISION REG. U. S. PAT. OFF. **SYSTEM**



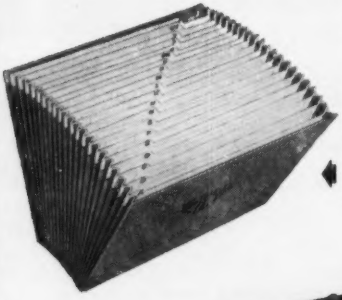
SMEAD'S PROPOSAL COVERS are furnished in many colors and finishes. Also available with open window.

SMEAD'S DESK FILE which is really a correspondence sorter. Available in printed or celluloid tabs.



INDIVIDUAL FILE POCKET

Designed for bulky material. Expansion up to 3½ inches. Ideal for important papers, contracts, etc.



SMEAD'S EXPANDING FILES

Made of leather-like material—long wearing—soil resistant. Made in many sizes with or without flap.

SMEAD'S "ON THE STREET" CARRYING CASE

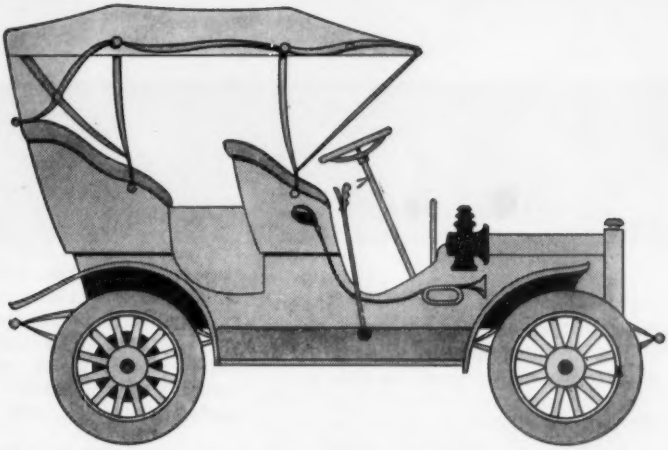
Perfect for carrying papers in all types of weather. Sheds water—glove-fitted whether partially or fully expanded. Furnished in four sizes.

Smead Manufacturing Company

Hastings, Minnesota

Chicago — Logan, Ohio — Los Angeles

For More Information Circle No. 298



This car was mimeographed!

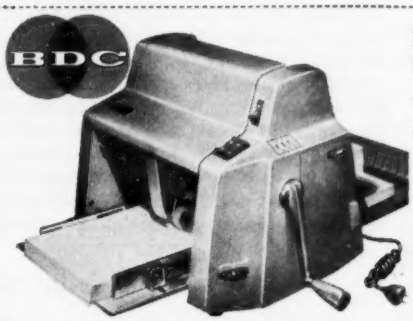
Ever see clean, sharp mimeographed pictures? It's easy to turn them out in *your* mimeograph department. Here's how . . .

Do it yourself Drawings, type faces, screened photos, virtually any graphic material, can be mimeographed from the new BDC electronic stencils. You can mimeograph your own catalogue sheets, news letters, sales bulletins, letterheads and office forms. Simply use an electronic stencil and the new twin cylinder, silk screen mimeograph, the BDC Rex Rotary M-4.

Designed like a printing press BDC M-4 uses *paste ink* continuously and evenly distributed on twin cylinders and silk screen. Result: copies *as sharp* as printing . . . plus clean hands and clothes because paste ink can never leak.

Surprisingly inexpensive If you're chugging along with a messy drum-type mimeograph . . . irritated by leaking ink, caked pads and fuzzy copy—shift to the clean, modern operation of BDC M-4. You'll get clean, sharp copies without mess or bother. The M-4 is electric and completely automatic, yet sells for *far less* than ordinary mimeographs.

Free portfolio Mail coupon for complete information including a mimeographed picture of the car.



BOHN DUPLICATOR CO.
Dept. 40, 444 Fourth Avenue, New York 16, N. Y.

Send more facts and portfolio of samples on the new **BDC REX ROTARY M-4**.

Name.....

Company.....

Address.....

City.....State.....

For More Information Circle No. 342

New Products

ELECTRONIC COMPUTER

General Electric Co., Computer Dept., Phoenix, Ariz., announces the 312 Control Computer System, designed for data processing. This moderately-priced, transistorized unit, with expansible storage capacity, is 75″ high, 108″ long, 24″ deep, plus

input-output equipment. Memory capacity can be increased from a basic 2048 words to 16,384 words and from 16 to 512 words of fast access storage also can be provided. Under program control all data tracks on drum may be written into or read from. More than 60 basic commands provide flexibility and allow programer to write efficient, easily assembled programs. An index register reduces storage requirements for the program, reduces programing cost, and increases speed. Average access time is 6.25 milliseconds. Word length is 19 binary digits plus one sign bit. Number representation is binary, fixed point. Decimals, alphabetics, and special symbols can all be handled. Unit uses punched paper tape input and electric typewriter output. Other types of digital output, such as punched tape and cards, are optional. An air-conditioning unit is an integral part of the equipment; and coded, printed wiring, plug-in boards are immediately accessible. **For More Information Circle No. 198.**

MICROFILM READER-PRINTER

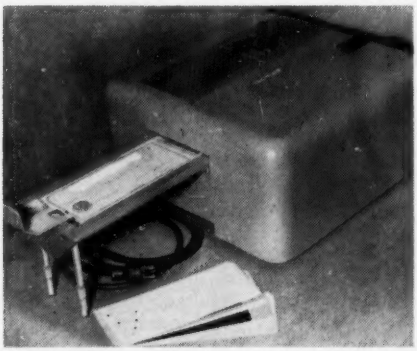
Minnesota Mining & Mfg. Co., Dept. RP-59, 900 Bush St., St. Paul 6, Minn., announces the Thermo-Fax Twenty-Nine microfilm reader-printer which makes prints up to 18″ x 24″. Anyone can operate the unit which accommodates 35mm film in aperture or tabulating cards. Cards

are merely inserted, a button is pressed and finished print is delivered in 15 seconds or less. Any number of sharp permanent copies can be produced. A masking control permits selective printing of full or half-size prints. The machine uses a roll of Thermo-Fax microfilm copy paper 18″ wide and capable of making 100 full-size prints 18″ x 24″, or 200 half-size drawings 12″ x 18″. Individual 18″ x 24″ prints cost 20c each. The table-top unit is 32″ high, 31″ wide and 36″ deep; operates on regular room current. Lens provides

magnification of 15x and will cover a standard D size aperture in accordance with accepted standards of the microfilm industry. Copy paper does not require special handling and can be stored anywhere with other office supplies. It can be loaded into machine in normal office light. The unit is designed to complement other modern office equipment. No running water, darkroom or tanks are required. Machine costs $919. **For More Information Circle No. 201.**

TAB CARD PRINTER-PUNCH

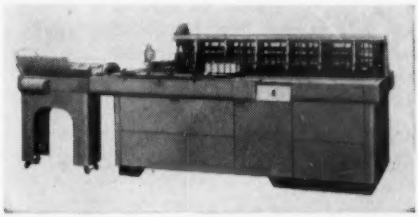
William L. Raub, Inc., Box 221, Silver Spring, Md., announces the Punchwriter which simultaneously punches and prints on a tabulating card or a carbon interleaved set of up to six parts. This allows cards and forms to be read by both humans and machines. A full field is printed and punched in one operation.



Punchwriter applications include preparation of checks for payrolls, bank money orders, and checks issued by branch offices for later audit in the main office's tabulating machine department. Other uses are for time cards, inventory control, machine loading and any system which could be improved by having tab cards printed and punched at remote locations where records originate. Any personnel can use the Punchwriter which can be set to accurately feed a particular form for any systems application. It punches round holes which all machines can process. Eliminates any delayed key punching or mark sensing. The machine is 12″ wide, 9½″ long (16½″ with feed tray extended,) 6″ high; weighs 30 lbs. **For More Information Circle No. 210.**

INSERTING MACHINES

Bell & Howell Phillipsburg, 14 E. Jackson Blvd., Chicago 4, Ill., has supplemented the Universal size Phillipsburg Inserter with the Universal B size, which has a broader scope of operation. This model handles envelopes from 3⅜″ x 6½″

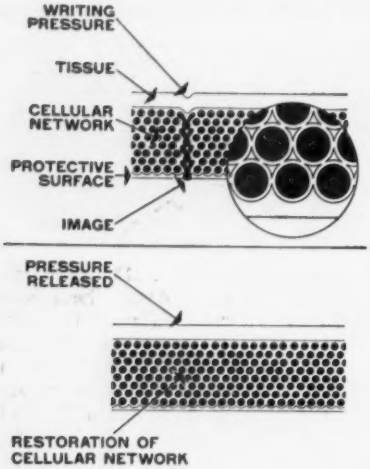


up to and including 9″ x 12″, accommodating flaps up to 3″ deep. These sizes exceed those of the standard unit, which are 3¼″ x 5⅛″ up to and including 8¼″ x 11⅛″. Changes also occur in lengths and weights of various models. These are as follows: CU-2, 8′9″, 1600 lbs; CU-4, 9′5″, 1900 lbs; CU-6, 11′10″, 2200 lbs; CU-8, 13′ 11″, 2500 lbs. The Universal-B size model is also available with 2, 4, 6 or 8 stations to insert a maximum of 2, 4, 6 or 8 enclosures, along with built-in postage meter, punched card attachment, open-feed station and postal indicia printer. All units utilize a conveyor type stacker. **For More Information Circle No. 163.**

COPYING PAPER

Columbia Ribbon & Carbon Mfg. Co., Glen Cove, N. Y., makes Plastisol which is described as a "live" copying sheet which "recuperates" after each use. The result of a ten-year research and development program, the cost of the product will be approximately the same as the company's high quality carbon papers. Plastisol, containing pigmented fluid, inks the paper, leaving a permanent image. This offers advantages in filing; and in

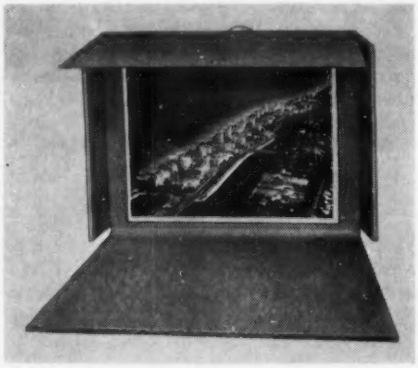
handling where an application involves the use of cards, making sharpness of copy and non-smudge factors necessary. Manufactured in one grade only, Plastisol can be used to produce a minimum of nine clear, sharp copies, eliminating the need to stock various grades and weights. A single sheet can be used approximately 60 times. Because each section of the paper "recuperates" as it is used, every copy produced is uniform in depth and clarity.



Plastisol is composed of a series of cells, each containing liquid ink. When struck by a type bar, some ink is released and, as soon as the type leaves the paper, ink from other areas of the sheet refills the empty cells. Thus the amount of ink that remains in Plastisol after each use is spread uniformly throughout the entire sheet. This results in even wear-down and uniform impressions every time. Copies made by Plastisol are said to be permanent, smudge-proof images that become part of the paper. Columbia received a patent on the Plastisol process more than a year ago. **For More Information Circle No. 160.**

PROTECTIVE MAILER

Chippewa Paper Products Co., 2425 S. Rockwell St., Chicago 8, Ill., makes the Chippamailer, for mailing photographs, artwork, blueprints and plans, insurance policies, publicity materials, etc., without the penalty of unnecessary bulk, weight and extra postage. Its double-faced corrugated is accurately scored for easy, quick filling and fastening with attached



string and button. Instant fold-up protection eliminates costs of slow wrapping, overwraps and corrugated protection extras. Seven convenient sizes (from 6¾" x 9½" x ¼" to 12¾" x 15½" x ¼") provide professional looking mailings. For free sample, **Circle No. 117.**

ACCOUNTING MACHINE & PUNCH

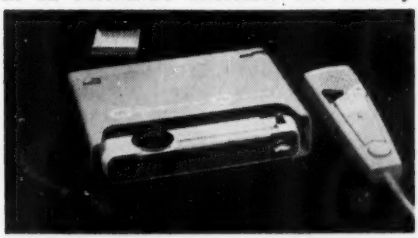
Monroe Calculating Machine Co., Inc., Orange, N. J., makes the Synchro-Monroe President which simultaneously punches tape or cards as a by-product of regular accounting jobs such as payroll, accounts

payable, accounts receivable, stock record or general ledger. Control chassis contains a simple plugboard arrangement allowing the machine to be re-programed in the user's office, should a change in punching

requirements arise. A removable encoder board permits choice of a 5, 6, 7 or 8-channel tape, or direct connection to an IBM 024 card punch. Encoder boards can be removed and replaced in seconds. To insure accuracy, a motion check is built into the tape punch to make certain every figure coded by the accounting machine is recorded on the tape. There is also an automatic parity check. Any malfunction of the tape punch touches off a red signal on the control panel, and the machine automatically becomes inoperative. The control panel is conveniently located at the base of the accounting machine for operating punching units. For the office which has not yet installed an integrated data processing system, the Synchro-Monroe President can function as a regular bookkeeping machine and be converted to IDP by merely attaching the control chassis and punch. It may be purchased in 1, 2, 3 and 4-register models. **For More Information Circle No. 153.**

PORTABLE DICTATING MACHINE

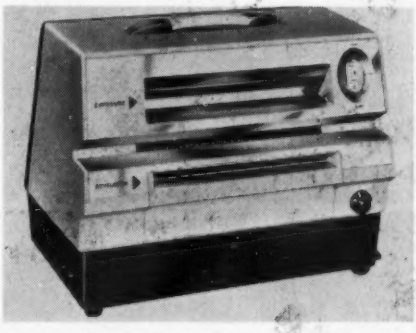
Comptometer Corp., 1724 N. Paulina St., Chicago 22, Ill., makes the Comptometer Coronet portable dictation machine which is book size (8⅛" x 6¼" x 1⅝") and weighs only 4½ lbs. small enough to fit an executive's briefcase. The smartly



designed, rugged die-cast chassis and case are finished in tropical tan and platinum. Small mercury batteries provide power for more than 24 hours of solid dictation. For home or office use an AC converter is available. All controls are built into the easy-to-hold microphone, including volume input and output, and automatic dictation-reverse-playback. Use of printed circuits and transistors assures maximum reliability. A California saddle leather carrying case with shoulder strap is available. The recording medium is a magnetic Mylar reusable belt which can be used interchangeably on any Comptometer dictation-transcription machine. Belts are mailable in standard No. 10 envelopes. **For More Information Circle No. 113.**

PHOTOCOPIER

F. G. Ludwig, Inc., 508 Coulter Place, Old Saybrook, Conn., makes the Contouramatic Mark II, an automatic single-unit photocopier with a sealed processing fluid supply. Although it provides the advantages of a photographic process, the fingers of the operator need never touch fluid

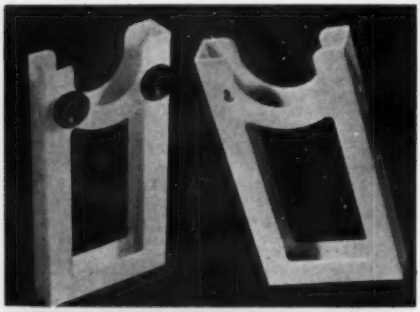


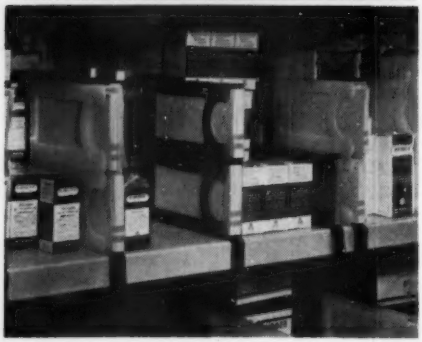
because its Seal-Pak system employs disposable sealed vinyl bags to contain the processing fluid. This eliminates handling and mixing, and prevents spilling of fluid. Life of the solution is also prolonged. The Contouramatic Mark II combines high speed exposure and processing with versatility in copying ability. It reproduces any mark made by black or colored pencils, regular or ball pens, stencils, rubber stamps, spirit duplicators, chalk, crayons or grease pencils, as well as typing and fine printing. It makes black-and-white copies up to 9" wide on card stock, colored papers, transparencies, and films for diazo reproduction, blueprints, offset plates, and visual projection. An integral paper dispenser, in the base of the machine, saves space and waste motion. The Contouramatic Mark II was styled by Dave Chapman, Inc., and

is available in warm gray or a rich red color for $189. **For More Information Circle No. 217.**

TAB CARD HOLDERS

Beemak Plastics, 7424 Santa Monica Blvd., Los Angeles 46, Calif., makes Beemak Tabulating Card Holders which can be attached to products, conveyor belts, bins, boxes, containers, shelving, etc., to implement production control, inventory control, invoicing and other punched card systems. Beemak Holders have withstood

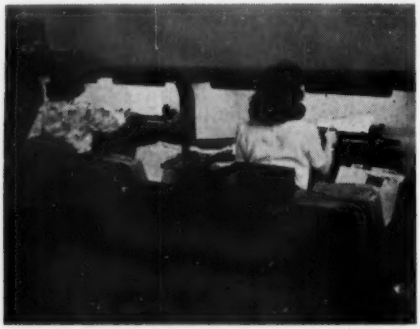




hard usage for seven years, and are made in two styles with choice of three types of metal clips for attachment in any manner. Made in ivory, red, green, blue, yellow and black for color coding as well as high visibility in certain areas. Keeping the correct tab cards at the source of record data provides better controls and faster handling of all types of merchandise. For free sample, fill out card fully and **Circle No. 219.**

SOUND CONTROL CABINETS

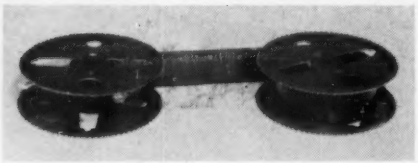
Watkins Industries, 9 Superior St., Youngstown 10, Ohio, makes Acoustors which are sound control cabinets for all office machines such as bookkeeping machines, Teletypes, Graphotypes, key punches, etc. Acoustors are said to reduce



harsh metallic machine noise by 50% or more; reduce operator fatigue; promote efficiency and accuracy; and provide the effect of a semi-private office for the machine operator. The cabinets are equipped with cool, vibrationless fluorescent lighting which reduces operator eyestrain. **For More Information Circle No. 204.**

CARBON RIBBON

Photostat Corp., Box 1970 TO, Rochester 3, N. Y., is marketing a carbon ribbon which can be used by many typewriters not equipped with carbon ribbon attachments. The ribbon, which has a Mylar



base, has been sold on a limited field-test basis during the past six months. Its successful use in an ordinary typewriter is possible because of tensile strength of Mylar. Previously, carbon ribbons needed special guides and feed mechanisms to prevent tearing the ribbon. Photostat's ribbon is suitable for offset duplicating by

either direct-image or photographic means, producing sharp, uniform characters, dense but smear-resistant. It also makes excellent originals for projection or contact photocopying. When used for general typing, it improves the appearance of correspondence and reports. Mylar-base when wound on conventional typewriter ribbon spools, is about twice as wide as usual carbon ribbons. It may therefore be used at least twice through, by employing different ribbon levels and reversing direction of feed. The thinness of Mylar permits an ample length of ribbon to be wound on the spool (140 yds. in the case of an I.B.M. Electromatic ribbon). Since Mylar-base releases all its carbon on first impact, it may be used profitably only on typewriters which advance the ribbon a full character-width at each stroke (as most typewriters do). Because of this limitation and because personal instruction as to usage is helpful for best results, Photostat Corp. is offering the ribbon only through its own sales representatives and agencies. Mylar-base is also available for typewriters equipped with carbon ribbon attachments. **For More Information Circle No. 222.**

EXECUTIVE INTERCOM

Tele-Norm Corp., 55 West 42nd St., New York 36, N. Y., makes the Executive Telephone equipped with automatic direct-call pushbuttons to simplify and speed interoffice contact between executives and key staff members called most frequently. It also has the automatic dialing features of standard Tele-Norm Pax phones for point-to-point contact with all other company employees. The executive can, by simply pressing a button, initiate a call to a key man without lifting his receiver or dialing. When button is pressed it becomes illuminated and the called phone automatically rings at five second intervals. When the called party lifts his handset, a ready signal buzzer sounds in the executive's instrument indicating the called party is on the line. Only then does the executive lift his receiver to begin conversation. If a button is pressed on the executive set and the called phone is busy, a memory device automatically completes the call as soon as the line is free. During this interval, no other calls can be originated or received by the busy phone. Executive priority or cut-in on a busy phone may be exercised by pressing the same button a second time, causing an

automatic break-in on the conversation in progress. Both parties can then be spoken to simultaneously, but privacy is maintained as an audible signal alerts the conversing parties that a third person has cut-in. **For More Information Circle No. 115.**

ACCOUNTING MACHINE

National Cash Register Co., Dayton 9, Ohio, announces the Class 31A accounting machine which has electrically controlled mechanisms for determining and

initiating the proper posting program or automatic machine operations. This can eliminate the need for operator to compare a customer's balance and payments

to determine whether he should or should not be mailed a post-due statement. It can automatically decide that an inventory item should or should not be replenished; automatically verify accuracy of balance pickups, cause the pickup errors to be automatically cleared, and the carriage automatically repositioned for making pickups again. Automatic totaling, subtotaling, repeat or date printing, etc., as carriage moves in either direction. There are more automatically controlled selections for both forward and reverse carriage tabulations. Data can be taken automatically from punched paper tape or punched cards as a direct by-product of original posting operation. There are 23 different models of the Class 31A, with and without built-in electric typewriter. **For More Information Circle No. 154.**

PHOTOCOPIER

Cormac Photocopy Corp., Dept. 52, 80 Fifth Ave., New York 11, N. Y., has developed the Convertible Corvette office copying machine embodying the single-copy transfer process with the unlimited copy method of the PolyCopy process.

This machine can provide either one or any number of perfect black-and-white copies, reducing copy costs as much as 50%. It will reproduce anything written, printed, typed, drawn or stamped in any media: ballpen, carbon, color and spirit duplication. It will copy from any type, weight or color of paper up to 11" wide and any length. Housed in an injection molded, unbreakable plastic cabinet, the Convertible Corvette sells for $279. The PolyCopy accessory, now a feature built into the new machine, is available as a separate accessory to those who already have a photocopy machine. The process reuses the negative produced in making the first copy to expose a single sheet of PolyCopy paper which quickly produces the mirror quality duplicate of the original. Any number of duplicates can be reproduced from the PolyCopy negative at any time. When not in use, the negative can be filed indefinitely as this becomes the reusable master. This provides copies at the cost of a single sheet of copy paper and eliminates peeling positive and negative sheets to save time and material cost. **For More Information Circle No. 109.**

SHIPPING BAGS

Sherman Paper Products Corp., 162 Oak St., Newton Upper Falls 64, Mass., makes the Corro-Bag, an all-purpose shipping bag that is lighter because built-in cushioning gives compactness and eliminates costly dead weight filler, cutting postage costs. Tough kraft and resilient Corrofiber combine to give spring-back cushioning. Single-wall construction protects against breakthroughs yet assures inner cleanliness.

Bags pop open and fill simply and quickly. Rapid sealing uses either staples or tape. Less bulk makes packing easier and faster and more Corro-Bags can be stored in a smaller area. Something weighing 5 ozs shipped in a No. 2 macerated news bag totals 9.3 ozs. The same object shipped in a No. 2 Corro-Bag totals 6.8 ozs., and Corro-Bags costs less. The saving in postage on 100 mailings would be practically the cost of the bags. **For More Information Circle No. 170.**

REPRODUCTION TECHNIQUE

Hampton Processes, Inc., Newton, N. J., announces that CTS Method which has had over ten years' use in the reproduction field and is based on formulas developed by reproduction engineer and consultant, Robert Parmentier. Designed for offices,

art, and printing departments for transparentizing opaque paper stocks to permit their utilization as intermediates for offset platemaking and in making direct reproductions. The transparentizer also can be used with the multiple-copy techniques. After transparentizing, sealer may be applied to preserve a permanent, nonseeping and tamperproof master copy for the files. For descriptive literature, **Circle No. 228.**

DESK PEN

General Pencil Co., 69 Fleet St., Jersey City 6, N. J., announces that its Semi-Hex Desk Pen now comes with an eraser at no extra cost. The eraser is mildly abrasive, so that it will not tear the paper. A needle point replaces the arrow point for easier handling when ruling lines. Accountants and bookkeepers who write small figures are said to prefer it for its fine line. Tests by New York Testing Laboratories reveal this pen skips less, has greater brilliance of line, and less smudging. It writes steadily for 32,222 ft. The pen is available in red, blue, green and reproducing black. **For More Information Circle No. 206.**

ADDING MACHINE

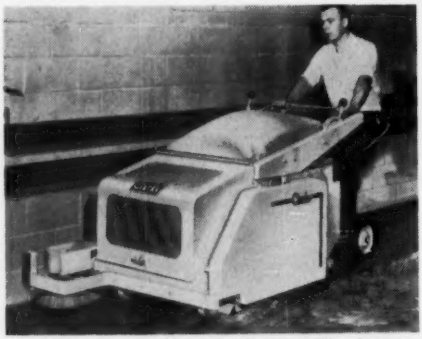
Addo-x, Inc., 300 Park Ave., New York 22, N. Y., announces the Model 541-30 three-position, shuttle carriage adding machine with grand total register, and split motor bars for vertical and horizontal postings. This machine can be made to function in three different ways, by means of a selector lever: (1) as a grand total adding machine with credit balance in first register and both add and subtract in second (grand total) register, without

shuttling; (2) listing amounts in first and second column, line total in third column and grand total of all line totals; (3) listing numbers (NA) in first and second column and amount in third column, total of third column by group or category, grand total of group totals. The machine is suited for inventory control; listing of freight bills and insurance premiums received; sales statistics; check reconciliation; accounts payable control; aging of accounts; commission statements; and numerous other special applications. The three-position shuttle carriage machine may be also used

as a statement and billing machine using numeric codes for commodity description. **For More Information Circle No. 225.**

SWEEPING MACHINES

Clarke Floor Machine Co., 30 E. Clay Ave., Muskegon, Mich., introduces the first two models of a line of power sweepers designed to reduce sweeping costs. Models CS-27 and CS-36, are 27" and 36" wide respectively, and the first of a complete power sweeper line to be produced by the company. Both sweepers have been designed and built to "do the work of up to 20 men and cut sweeping costs up to 80%." They are said to sweep cleaner, faster and more dust-free than any other sweeping method, pick up all types of debris, operate easily in congested areas or large, open spaces, inside or outdoors. Model CS-27 sweeps up to 35,000 sq. ft. per hour and Model CS-36 covers up to 50,000 sq. ft. Among the features on both units is forward-stop-reverse handle bar that provides fingertip control and eliminates gear shifting. The easily removable dust bag evacuates dust from the entire width of the sweeper, yet is integrated in the sweeper design. Rotary broom is adjustable to 23 different heights

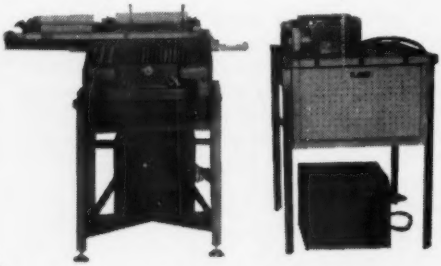


for maximum life. Optional side broom sweeps up to walls. Large debris hopper is easily detached and easily emptied. Neoprene aprons enclose the broom chamber and keep dust confined. Heavy duty, trouble-free belt drive. Both models pro-

TAILORED AUTOMATION

Your Present machines Do more work . . . *AUTOMATICALLY!*

SYSTEMATICS . . . EXCLUSIVELY! SYSTEMATICS MODEL N 275 INTERCOUPLER punches *alphanumeric* tape from your NCR Class 3100 . . . *automatically.* Plugboard flexibility allows fully automatic selection of up to twelve programs without regard to sequence! Error Control, Parity Check, Selective Rack Readout and many other automatic features make the N 275 INTERCOUPLER adaptable to all NCR-to-tape applications. The SYSTEMATICS N 275 is the



ONLY machine available today which produces *alphanumeric* tape from an NCR 3100 operation!

For additional information on the N 275 and other SYSTEMATICS INTERCOUPLERS, tailored to your existing business machines, write today:

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For More Information Circle No. 462

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For More Information Circle No. 325

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For More Information Circle No. 389

pel themselves at speeds up to 3 mph and Model CS-36 is available with a riding sulky for operator. **For More Information Circle No. 122.**

ADDING MACHINE

General Gilbert Corp., 150 Broadway, New York 38, N. Y., offers a fully-electric credit balance adding machine, the Model 811, which computes credit balances directly and adds 11-columns, totals 12. Other features include multiplication key with automatic stepover and condensed keyboard with three zero keys and

non-print device. Streamlined steel housing is finished in baked enamel with stainless steel trim. Retailing at $249, the 811 is said to be one of the lowest-priced machines with credit balance and other advanced features. While compactly designed and light in weight for portability, the machine is durably constructed to handle heavy workloads. **For More Information Circle No. 199.**

SPIRIT MASTERS

A. B. Dick Co., 5700 W. Touhy Ave., Chicago 48, Ill., reports that a clear plastic coating replaces the former metallic coating on all its spirit masters. The plastic-coated masters maintain the cleanliness

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COPY from ONE

NORD

MASTER NEGATIVE

Whether or not you NEED a million copies or just 5, 10 or 25 from one master negative, it's nice to know that NORD can do the job . . .

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Yes, ONE MILLION COPIES are possible from ONE negative—sharp, crystal clear copies from *any* original . . . ball point, crayon, pencil, etc. with reproduction even BETTER than the original!

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File the master negative . . make ALL the copies you need — today, tomorrow or NEXT YEAR. No special skill required. NORD'S single dial makes it easy to perform operation in only seconds.

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Fill and mail the coupon today! A Nord local representative will be happy to demonstrate NORD'S new M-Copy without obligation.

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For More Information Circle No. 279

feature of the older metallic-coated sets, while offering additional advantages. Copies are consistently more intense in color, with no sacrifice in length of runs. Greater sharpness in copy provides improved readability, especially where smaller elite types are used. The master units also make possible easier and faster makeready, resulting in more efficient imprinting of systems forms, letterheads, titles and similar spirit duplicating work. **For More Information Circle No. 126.**

CARD FILES

Yawman & Erbe Mfg. Co., 1099 Jay St., Rochester 3, N. Y., makes Card Record Desks in contemporary design in two sizes, featuring a lower overall cabinet height for easier accessibility, and greater width and depth for greater capacity. Drawers are equipped with heavy-duty, full, ball-bearing roller suspension. In the seven-drawer model, up to 94,000 5" x 3" cards are instantly available in one cabinet. The five-drawer cabinet accommodates 5" x 3", 6" x 4", 8" x 5" and tabulating cards. Drawers of both models hold up to five cross-filing trays and are available with or without trays. The linoleum top posting section with rounded

corners is optional on right or left and extends 10" beyond the cabinet front at the flip of a finger, bringing tray and table operation together to eliminate fatigue. The back of the posting section is

Reducing Noise of Business Machines is SOUND Business with

ACOUSTORS

- Reduce the harsh metallic machine noise by 50% or more.
- Make for less fatigue.
- Increase efficiency and accuracy.
- Ease the strain on eyes, ears, and nerves.
- Provide modern, cool, shadow-free, and vibrationless Fluorescent lighting.
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- Add beauty, as well as efficiency to your offices.

No Other Method of Noise Control Has Proved So Successful or Economical

THE *Original* CABINETS FOR NOISE REDUCTION TREATMENT OF OFFICE MACHINES.

WATKINS-INDUSTRIES 9 Superior Street Youngstown 10 • Ohio

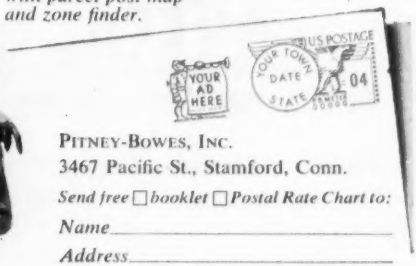
For More Information Circle No. 391

No more lick-and-stick mailing!

"I've licked my last stamp, sopped my last envelope flap. They got me my postage meter! No more frantic 5 p.m. dashes to the postoffice for stamps, no more policing that silly old stamp box. We've got modern metered mail in this little branch office. Thank you, Boss!"

- With a meter, you print postage as you need it—directly on the envelope, with a dated postmark, and your own small ad, if you like. You always have the right stamp on hand.
- A meter protects postage from loss, misuse; does its own accounting. Permits company-wide postage control.
- Postage is "dialed" for any class of mail—even parcels.
- The meter seals as well as stamps—most models do both simultaneously! Mailing is fast and metered mail requires less handling in the postoffice. It often catches earlier mail trains and planes.
- No minimum mail volume is required. And anyone can easily use a meter—even the boss.
- Today, even the smallest office or branch can have a postage meter, now that there's a low-cost desk model (the DM). One-third of its users spend less than $1.00 a day in postage! Electric models for larger mailers. Ask the nearest PB office to show you. Or send coupon for free illustrated booklet.

FREE: *Handy desk or wall chart of postal rates with parcel post map and zone finder.*



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Offices in 121 cities in U.S. and Canada.

For More Information Circle No. 337

OCCUPATIONAL DISEASES NO. 2

(presented for a better understanding of tab room personnel)

this man has . . .

"CARBON-CREEP JITTERS"

There was a tab-man from New Whitter,
who suffered from "carbon-creep jitter";
forms carbons he found,
would sneak slyly around —
they carried him off on a litter!

Here's Clarkson's Cure . . .

STRONG FORM PACKS

Specialized equipment developed by Clarkson for interleaving of carbons, collation of parts, stapling . . . eliminate the "creeps" and assure perfect registration. Clarkson cuts down form failure . . . lets you enjoy form success!

Write NOW for the name of your nearest representative.

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A subsidiary of Graphic Controls Corp.

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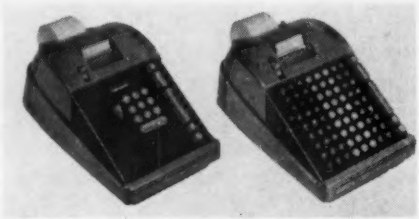
For More Information Circle No. 392

recessed with a shelf 9½" deep for a wastebasket up off the floor and out of the way. An opening at the top of the recessed back permits wastepaper to be disposed of easily from the user's side of the desk. File drawer pulls have a double thumb latch for right or left-hand operation. Kneespace drawer has lock and utility tray. Cabinets and posting sections come in decorator colors or premium finishes. **For More Information Circle No. 161.**

ADDING MACHINES

Victor Adding Machine Co., 3900 N. Rockwell St., Chicago 18, Ill., announces the 1959 Imperial line of medium-priced quality adding-subtracting machines. Featuring new style, high speed performance and other engineering advancements, these are ahead of the comparable models built a few years ago yet priced considerably lower. Precision-built for years of trouble-free service, machines have a lightweight aluminum case, rugged construction and quiet operation. Natural angle keyboard



prevents finger fatigue. Control keys are within finger-tip range of the keyboard, making the speed-touch system more effective. Steel working parts are tooled precisely to prevent wear from constant use. The Imperial has a capacity of one cent less than 10 million dollars, electrified total and sub-total keys, printing press action, direct automatic subtraction, repeat key for multiplication, non-add key and automatic credit balance. The optional Add-N-Mark prints gummed or pressure sensitive labels for price-marking merchandise. Electric, hand operated, 10-key and full keyboard models are available. **For More Information Circle No. 203.**

Now Venus equips the famous "cross between the pen and pencil"® with the remarkable new Camel ink-cartridge; doubles the ink supply, doubles the writing mileage. Result: the most efficient, economical writing tool that ever went to work in the office.

Another big exclusive: the new cone-shaped point that writes smoother, easier from any angle. Other great ball *PEN*·cil features: the slim wood barrel that's light as a pencil; permanent ink that writes dry; nothing to twist, click or turn. And Venus now offers this great office favorite in 9 models—each designed for a specific writing job. 29¢, 39¢, 49¢, 59¢ each. Less by the dozen. Blue, black, red or green ink. Order from your stationer today.

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VENUS ball *PEN*·cil®

MAIL THIS FREE TRIAL COUPON TODAY O-5-59

Gentlemen: Please send, for department testing, one sample Venus ball *PEN*·cil, style and ink color indicated.

- ☐ Double Duty (39¢). Camel cartridge. Ink Color____
- ☐ for Stenographers (49¢). Camel cart. Ink Color____
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- ☐ Super Fine (39¢). Ink Color____
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- ☐ for Checking (49¢). Ink Color____
- ☐ Laundry Marker (59¢). Black Ink Only.
- ☐ Liquid Velvet (29¢). Erasable Liquid Graphite.

Venus Pen & Pencil Corp., Lewisburg, Tenn.

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(please print)

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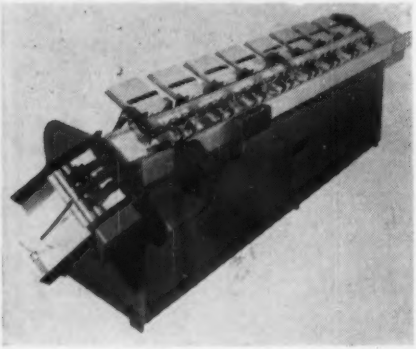
ADDRESS_____

STATIONER'S NAME_____

For More Information Circle No. 386

COLLATOR

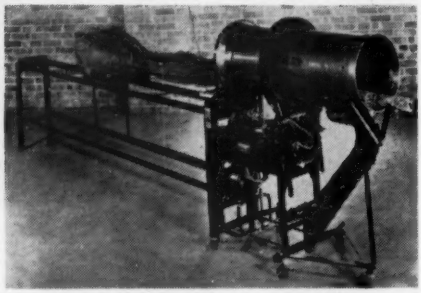
Macey Co., 13835 Enterprise Ave., Cleveland 35, Ohio, is marketing the Maceymatic completely automatic 8-station collator that can gather up to 17,000



sheets per hour with only one girl operator. It handles the most common office sheet sizes from 5" x 8" through 9" x 12" and from onionskin to card stock. Attachments include a stapler which can handle sets of paper up to 1/16" thick, and an offset stacker and tape delivery unit. Power can be supplied from any 110-volt AC outlet. Floorspace required is less than 27 sq. ft. **For More Information Circle No. 175.**

TYING MACHINE

B. H. Bunn Co., 7605 Vincennes Ave., Chicago 20, Ill., has developed a ring tying machine that will tie any length bundle. There is no limit on the length of the bundle to be tied. The machine will



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MAGNE-DEX

"The Card That Walks"

VISIBLE CARD SYSTEMS

The Nation's Fastest Card Finding Systems—By Your Own Test

MAGNE-DEX provides VISIBILITY for any card record file. The headings on 15 to 20 cards become instantly visible wherever the operator places her hand to pull, replace or rearrange a card. This MAGNE-DEX feature saves up to 60% in time compared to conventional files of all types. Let us show you how MAGNE-DEX can improve the card file in your office, whether it contains a few hundred or thousands of cards of any size.

Permanent magnetic forces cause repulsion and separation, one card from the other.

Write today for full information, and the name of the MAGNE-DEX dealer in your city.

BUSINESS EFFICIENCY AIDS

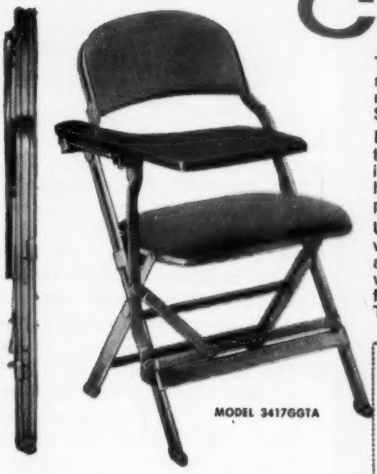
8114 Lawndale Avenue, Skokie, Illinois

For More Information Circle No. 393

How to seat 3 persons in one chair

CLARIN

Tablet arm slides down when not in use



MODEL 3417GGTA

Guaranteed for 10 years

Triple-purpose plus! for the band session—secretarial work, the conference and for many other uses, the Clarin Reserve Seater fills the bill.

New comfort—new luxury—new economy—this amazing all steel folding chair is indispensable for offices, schools, churches, hospitals, industrial institutions and all places where space saving counts.

Use 'em . . . fold 'em . . . move 'em wherever needed . . . then fold and store in a minimum of space. Prove for yourself without obligation. Send coupon or letter for sample of the Clarin Triple-Purpose Tablet-Arm Chair on 30 day free trial.

Clarin Mfg. Co., Dept. 50 4640 W. Harrison St., Chicago 44, Ill.
Without obligation, send SAMPLE of Clarin triple-purpose chair.

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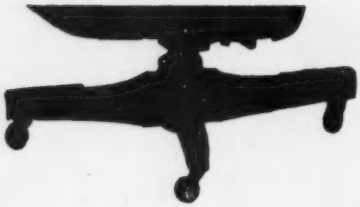
Pioneers in Seating for Institutions and Business. Established 1925

CLARIN Manufacturing Co., 4640 W. Harrison, Chicago 44, Ill.

For More Information Circle No. 322



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"Floor Show" transparent chair mats give under glass protection for fine office carpets. Almost invisible . . . yet, with a soft luster to enhance your fine furnishings . . . to exemplify good taste.
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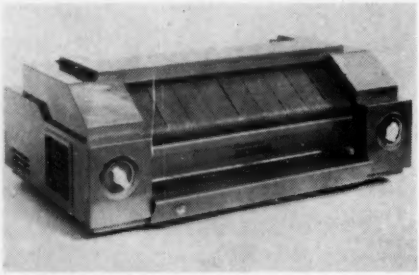
Representatives in Principal Cities.

For More Information Circle No. 394

handle bundles with diameters up to 11¾" and tie odd-shaped diameters and bundles of varying sizes without adjustments, automatically compensating for size and shape. Once a bundle is placed on the machine, total time for each tie is only 2-3 seconds. A foot trip starts tying process, during which a revolving arm carrying twine quickly encircles the bundle, knotter engages to tie twine in a double-loop, non-slip knot, and cutter cuts twine close to the knot. Powered from any 110-volt source, entire machine is operated by one motor. It is also mounted on rollers for quick transfer from one place to another. **For More Information Circle No. 150.**

WHITEPRINT MACHINE

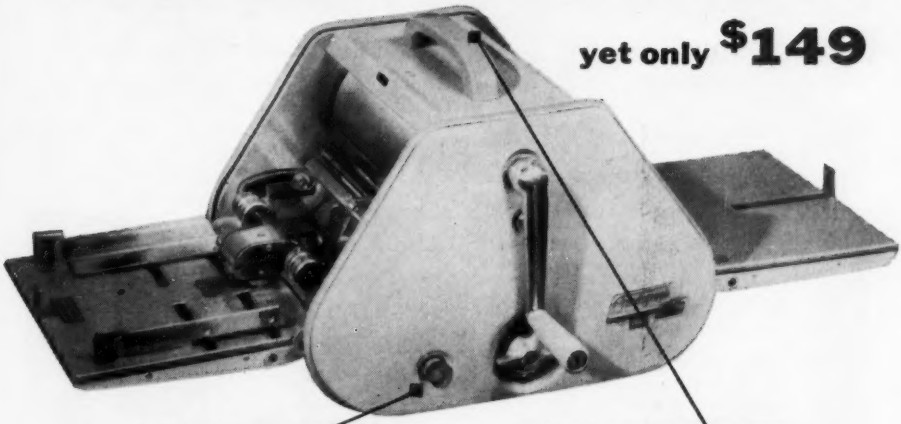
Reproduction Products Co., 12790 Westwood Ave., Detroit 23, Mich., announces the Reprofax Viking, a compact whiteprint machine which produces sharp, evenly-developed copies. It has a full 18"



printing width for processing two letters side-by-side or reproducing 18" wide drawings of any length. With printing speeds up to 18 ft. per minute it can make as many as 450 letter-size copies per hour. Easy-to-read copies can be obtained of anything printed, typed, written or drawn on ordinary translucent paper. Operation is simple requiring no special training. The unit has only two controls: one for motor and lamp, the other for speed. The Viking can be located anywhere in the office or drafting room since it requires no exhaust venting for fumes or excessive heat. Its compact design makes it easy portable. Operates on stand-

ONLY DUPLICATOR THAT'S SPILLPROOF AND PORTABLE

yet only $149



EXCLUSIVE!
Fluid is pumped direct from either closed cartridge inserted in machine or from can you buy it in. No pouring. No dripping. No mess.

EXCLUSIVE!
Only Fordigraph 100 is designed to be portable (though it is a heavy-duty duplicator). Use it anywhere. Store it anywhere.

THE FORDIGRAPH 100 is a pleasure to have in your office because it's *specially engineered for office use*. It is spill-proof . . . leak-proof . . . inkless—and has many important automatic features. Sturdy . . . built for heavy work loads—yet lightweight (only 26 lbs.) . . . easily portable . . . and it folds up compactly for carrying or for dust-free storage. Smartly styled with convenient carry handle.

FORDIGRAPH prints many hundreds of copies from one master . . . up to 5 colors at once! Has automatic paper-feed for high-speed duplicating. Prints anything written, drawn, typed. Takes all sizes, post card to legal.

All this at an unprecedented low price! See it at your Dealer's today!

A few dealerships still open. Inquiries invited.

FORDIGRAPH 100

INKLESS DUPLICATOR

FORDIGRAPH CORPORATION OF AMERICA 387 Fourth Ave., N. Y. 16, MU 4-5405

For More Information Circle No. 336

Are Your Filing Methods As Fast as Your Machines?

ACME VISIBLE

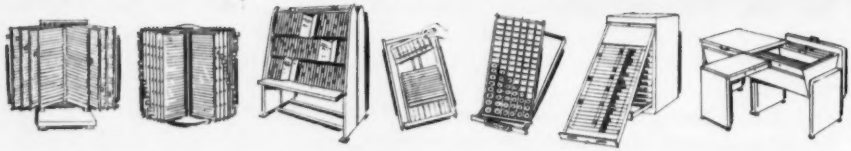
TRAY CABINETS

speed the availability of source material for

AUTOMATION

Punched cards and tapes filed in ACME CABINETS are instantly available to the operator with all the advantages of visible indexing, signalling, protection security, compactness and convenience. Trays with grids or retainers for rolled tapes—pockets for punched cards — folded cards for filing tapes together with related record information, are but a few of the many ingenious arrangements which have satisfactorily solved a multitude of special requirements for the filing of source material for Record Automation.

Electronic machines produce punched cards and tapes at astounding speed. Once punched many become permanent records to be used over and over again. Acme Visible Records and equipment provide for filing and fast finding, with SEEABLE indexing speed handling of this material to keep pace with machines.



DESK STANDS ROTARIES FLOOR STANDS CARD HOLDERS TRAYS CABINETS EXPANDER CABINETS

ACME VISIBLE RECORDS, INC., Crozet, Virginia
We are interested in filing Q-559
☐ Tapes (approx. length) _____
☐ Edge-punched cards
☐ I.B.M. Cards
(Approx. number of records)

Company _____
Attention _____
Address _____
City _____ Zone ____ State _____

Acme makes the most complete line of visible record equipment in the world. Let us show you how to save time, labor and money with an Acme Visible Record System designed to meet your specific requirements.

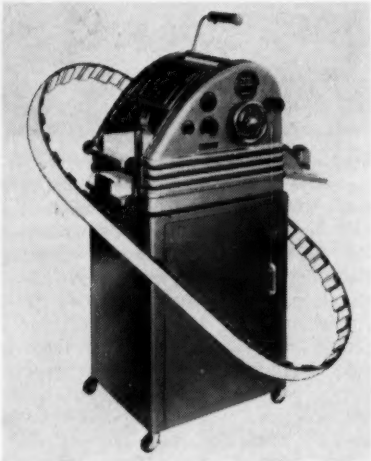
ACME VISIBLE RECORDS, INC.
Crozet, Virginia
District Offices and Representatives in Principal Cities

For More Information Circle No. 351

ard 115 volts AC, 60 cycles. A constant wattage transformer stabilizes light output from the 800-watt printing lamp despite voltage fluctuations. The unit is 30" wide, 18½" deep, 11½" high; weighs 119 lbs. **For More Information Circle No. 202.**

STENCIL DUPLICATORS

Milo Harding Co., 144 Tempo Bldg., Monterey Park, Calif., reports that an exclusive, endless toothed-belt drive now replaces the former steel bands on Models 300 and 300DA Tempo-Geha Paste Ink Stencil Duplicators. This belt is strengthened with endless steel strands tested under severe tests. It provides silent running, positive drive even in continuous



operation, non-slipping, and almost unlimited life. At no increase in price, the newly equipped dual-cylinder duplicators continue to produce a press-perfect kind of copy. Model 300DA shown here has a built-in collator-interleaver which permits the finest copy to be produced on unusual, airmail or heavy papers, and card stock. Feeding size is from 3¼" x 3½" to 9½" x 16" and copy printing area is up to 8½" x 13½". **For More Information Circle No. 123.**

MODERN Graypoints are "balanced" in size and shape, "pointed" in luxury-textured rubber, for *controlled* fastest, cleanest, so-accurate erasing . . . a work-saving pleasure for your typists, a definite overhead-saver for you.

No. 3650 GRAYPOINT WHISK ►

Hexagonal, wood case eraser with quality gray rubber core, fits comfortably in the hand. Attached brush whisks away eraser crumbs. Won't roll off desks. Easily repointed in any pencil sharpener or with a knife. (No. 365 GRAYPOINT, same eraser without brush.)

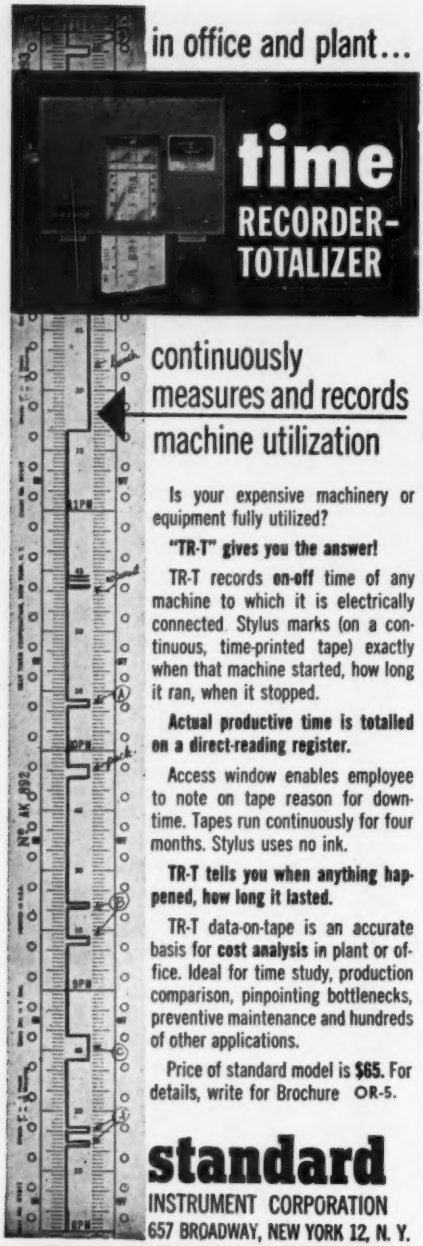
◄ No. 378 GRAYPOINT

This paper wrapped eraser with the pull string for easy repointing can be repointed right at the desk. Same quality gray rubber core as No. 3650 GRAYPOINT.

Ask Your Stationer Now for Pencil-Like Easy-to-Hold, Easy-to-Point WELDON ROBERTS GRAYPOINT ERASERS

WELDON ROBERTS RUBBER CO.
365 Sixth Ave., Newark 7, N. J.
World's Foremost Eraser Specialists

For More Information Circle No. 395



For More Information Circle No. 396

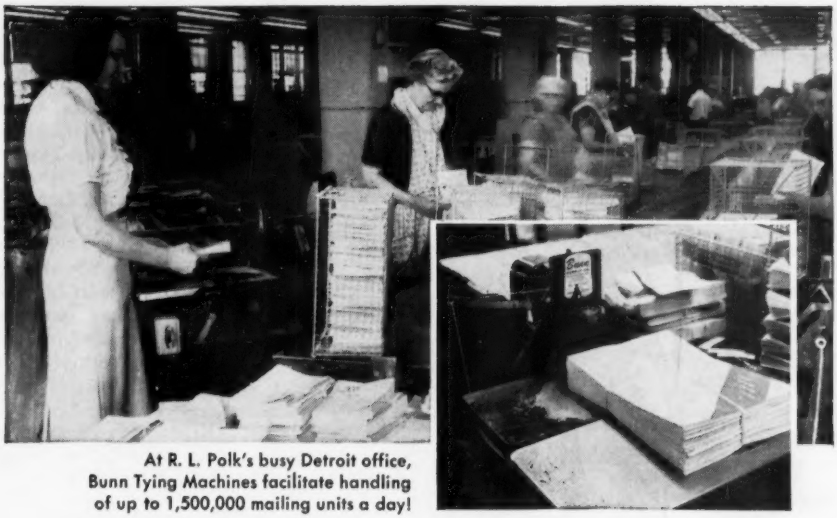
PORTABLE MICROFILMER

Recordak Corp., 415 Madison Ave., New York 17, N. Y., announces the Recordak Portable Microfilmer which weighs only 24 lbs., less than an office typewriter, and it can be carried from one department to another. For travel convenience, a lightweight accessory carrying case is available. Film units are removable and interchangeable. Many features of the Recordak Portable were previously available only on larger micro-

filmers. Film unit has a capacity of 100 ft., and will microfilm 2500 letters or 6000 check-size documents. Two rolls of film may be exposed simultaneously. Audible and visual signals assure the operator of adequate film supply and proper machine operation. Documents 12″ wide by any length may be photographed, and are ejected into receiving tray in their original sequence. Speed is approximately 46 letters, or 96 checks, per minute. Low-cost accessory items include a lightweight carrying case, document counter and exposure control. **For More Information Circle No. 200.**

RIBBONS FOR OFFSET

American Ribbon & Carbon Co., Box 1212, Rochester 3, N. Y., makes Arco-Lith fabric and carbon paper ribbons for typing copy for offset or other reproduction processes. Arco-Lith Greenback No. 800 carbon paper ribbons produce sharp, opaque copy for long runs from paper offset plates. Impressions can be cleanly



At R. L. Polk's busy Detroit office, Bunn Tying Machines facilitate handling of up to 1,500,000 mailing units a day!

Machine-tying beats hand-tying 10 to 1

Take it from R. L. Polk & Co., internationally famous direct mail organization. Machine-tying with Bunn is the automatic way to *streamline* your tying methods!

Ties anything. Mail, printed materials, packages, cartons—yes *anything* you now tie by hand can be tied neater, tighter and faster on a low-cost Bunn Package Tying Machine.

Operation is simple, positive. All you do is position the object to be tied, then step on a trip. Automatically, you get a precision, slip-proof tie . . . in 1½ seconds or less. Faster than hand tying? About 10 times.

And remember: size or shape of the object to be tied makes no difference. The Bunn Package Tying Machine is completely self-adjusting.

Send today for full data on how Bunn automatic tying can cut costs for *you*. Use the handy coupon below.

PACKAGE TYING MACHINES — SINCE 1907

BUNN

B. H. BUNN COMPANY

7605 Vincennes Ave., Dept. OF-59 Chicago 20, Ill.
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MAIL THIS COUPON NOW

B. H. Bunn Co., Dept. OF-59
7605 Vincennes Ave., Chicago 20, Ill.

Please send free booklet which illustrates how we may cut costs with Bunn automatic tying.

Name _____

Company _____

Address _____

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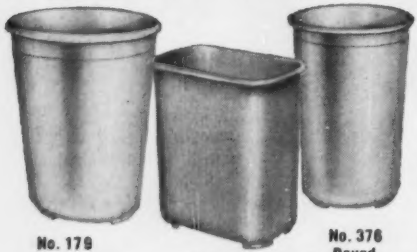
"furthermore I recommend
Polly Flex®
WASTEBASKETS"

the most modern office baskets, noiseless, unbreakable, in colors



No. 179 Round 15" dia. x 17¾" high
No. 180 Rectangular 15½" x 10¾" x 17 11/16"
No. 376 Round 11" dia. x 15½" high

Round and Rectangular in Grey, Sea Foam Green, Sand

Standardize your office baskets with Polly Flex polyethylene Wastebaskets, in colors to match your decor. They won't scratch floors or desks. They're dent-proof, won't corrode, simply wipe clean. Ask your supplier to show them to you.

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Polyethylene Wastebaskets
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Republic Molding Corporation
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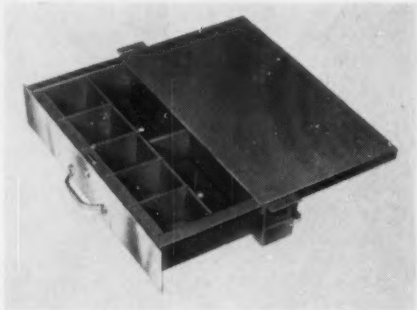
For More Information Circle No. 397

erased and the ribbons' carbon finish is electronically controlled for uniformity. A plastic leader allows quick, clean ribbon changing. The strong, light green tissue paper reduces eyestrain. A warning signal indicates that ribbon's end is near. Made for all typewriters as well as Vari-Typers, Justowriters and Flexowriters; packaged in reusable plastic boxes, available in black and colors. Arco-Lith No. 502 plastic carbon ribbons are almost twice as long as the average paper ribbons and the strong Mylar base prevents ribbon breaking in typewriter. They produce extra sharp copy and erase cleanly. Arco-Lith Tidy Touch silk and cotton offset ribbons have specially coated ends for clean ribbon changing. All Arco-Lith ribbons are equally satisfactory for general correspondence typing. For literature on introductory offer, **Circle No. 174.**

COUNTER CASH DRAWER

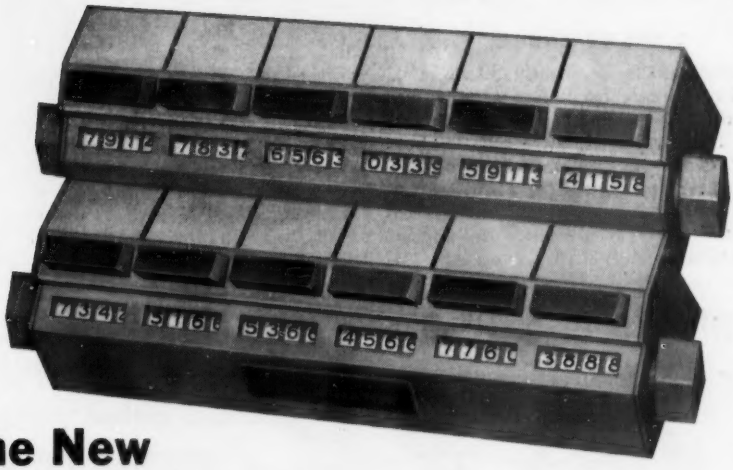
Indiana Cash Drawer Co., Box 236B, Shelbyville, Ind., makes the Model S-2 under-counter Cash Drawer for luncheonettes, drive-in restaurants, motels, drive-in theatre concessions, carnivals, amusement



parks, etc. The money drawer arrangement has five coin tills in line across the front. Two coin tills are 3¼" x 3" long; the other three are 2 13/16" x 3" long. These sizes are practical for either packaged or loose coins. Rear of money drawer has two currency compartments each 7½" long x 3 13/16" wide, with hinged bill weights. Drawer is equipped with high-grade lever tumbler lock of the spring bolt

Completely Redesigned

9 EXCLUSIVE NEW FEATURES IN '59



The New

ALL-METAL MULTIPLE-TALLY by

DENOMINATOR

Better by design to meet *all* your sort-and-count requirements. Compare with any other manual tabulator on the market. It's the greatest design advance in manual tabulation history. Prove it to yourself. Send for your copy of illustrated bulletin NOW.

Send for FREE bulletin

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261 Broadway, New York 7, N. Y.

☐ Please forward literature and prices.
☐ Please have representative call.

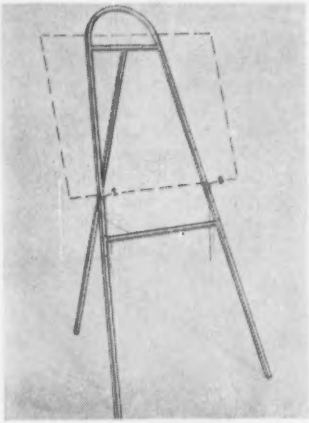
Name_____
Company_____
Address_____

For More Information Circle No. 262

type. Large warning gong rings automatically each time drawer is opened. Construction is heavy gauge steel throughout. Six-roller mechanism permits drawer to roll in and out of the case easily. Mounting holes are pierced in top of case. Screws furnished. Drawer and case are finished in gray baked enamel. Drawer front is chrome plated and polished. Overall dimensions 18½" x 10" long (front to back not including handle) x 3¾" high. Inside depth 2⅞". List price $31.25, in fibreboard carton. Weight approximately 16 lbs. **For More Information Circle No. 176.**

DISPLAY EASEL

Metal Products Engineering, Inc., 4002 Long Beach Ave., Los Angeles 58, Calif., announces its De Luxe Featherweight Office Display Easel, designed to hold display cards of practically any size or shape. Developed specifically for lobbies, conference rooms, and other office locations, the easel is attractive in appearance and extremely light in weight. The tripod frame is made of 1" heavy duty aluminum tubing heliarc-welded for strength and fine appearance. Display



cards as narrow as 16" are supported by two stainless steel pegs in the front legs. Pegs, secured by safety chains to the frame to prevent loss, may be inserted

"Common Sense"
for Travel Expense

Weekly & Monthly Books, Weekly Sheets

Beach's Common Sense Expense Books

FIRST in the field, LEADER in Sales

● Use BEACH'S — sturdy, complete and convenient . . . BEST way to keep uniform, permanent records vital for taxes today.

At Stationers, or Write

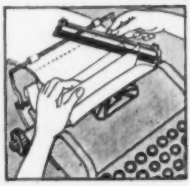
BEACH PUBLISHING CO. 19829 W. McNichols Rd., Detroit 19, Mich.

For More Information Circle No. 399

Dupli-Typer

eliminates carbon paper

makes inked copies



Dupli-Typer Ribbon Attachments for typewriters increase production, reduce costs on continuous form work.

Dupli-Typer Bookkeeping Machine Attachments eliminate carbon jackets, provide complete visibility of entire journal sheet.

FASTER • CHEAPER • CLEANER • BETTER

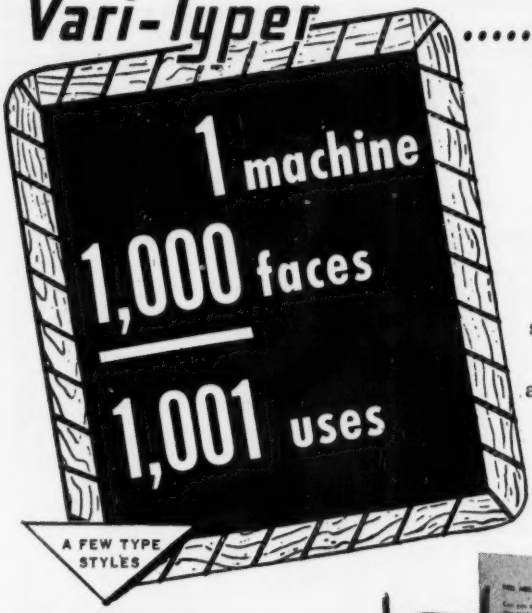
Dupli-Typer Corporation

456 Fourth Avenue, New York 16, N. Y.

For More Information Circle No. 398

Vari-Typer®

.....the simple arithmetic of great savings



One Vari-Typist and one machine can supply the type . . . attractively professional-looking, as in the copy you are now reading . . . for any method of printing or duplicating. Type fonts, in all the popular styles and sizes, are instantly changeable and automatically spaced. Savings are enormous.

and a few uses

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PARTS LISTS
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Looks like a typewriter... Writes like PRINTING!

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Cutting Costs Is Our Business

Copy by Vari-Typer.
Heads by Headliner.

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COMPANY.....
ADDRESS.....
CITY.....ZONE....STATE.....

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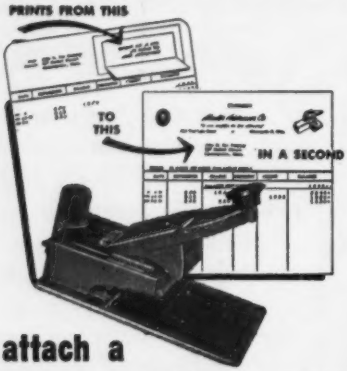
VARI-TYPER CORPORATION
720 FRELINGHUYSEN AVENUE, NEWARK 12, N.J.

For More Information Circle No. 468

NOW YOU CAN ADDRESS MONTHLY STATEMENTS IN 1/3 THE TIME . . .



attach a PRESS-ON MASTER PATCH to your ledger cards!

SAVES YOU TIME! Reduces statement addressing in the average office up to 60%.

PREVENTS ERRORS! Eliminates wrong addresses, transpositions of characters, misspelling, etc.

ENABLES YOUR LEDGER CARDS TO WRITE! In addition to heading statements and collection notices you can also address direct mail, service follow-ups, shipping labels, bills of lading and other office forms . . . all from your ledger card file.

AS EASY AS "1, 2, 3"

- Just type the name and address ONCE on the PRESS-ON MASTER PATCH. They're easily prepared in an ordinary typewriter . . . no special equipment required.
- Attach the adhesive backed MASTER PATCH to your ledger card. They press-on instantly . . . to existing records of any size or shape . . . no need to change your present accounting system.
- Address statements, month after month from your ledger card . . . Automatically!

PRINT WITH THE MODEL 60 *Master Addresser* | MACHINE COMPLETE WITH SUPPLIES FOR 500 ACCOUNTS | $70.00 Plus Fed. Exc. Tax

MASTER ADDRESSER COMPANY
6500-B West Lake St. • Minneapolis 26, Minn.

For More Information Circle No. 403

in a graduated series of holes to accommodate displays of different sizes and proportions. Supporting legs terminate in welded and formed aluminum plugs with plastic tips that will not mar floors. The unit is 63″ high, and occupies a floor-space 29″ wide and 26″ deep. **For More Information Circle No. 209.**

OFFSET & COVER STOCK

Eastern Fine Paper & Pulp Div., Standard Packaging Corp., Bangor, Me., has added Atlantic Pastel Offset and Atlantic Pastel Cover to its line of fine business papers. These pastel shades in French cream, ocean green, dustie pink, smokie gray, daffodil yellow and mistie blue are perfect match mates. They have a soft

mellow warmth which is ideal for creative effects for a variety of distinctive business printing. In providing the important surface characteristics necessary for printed pieces of exacting requirements, a special suede finish, with a velvety touch, was developed. This, with uniform tub sizing, gives superb affinity for crisp impressions, smooth flowing tones and solids. **For More Information Circle No. 144.**

CONTINUOUS SLIDE PROJECTOR

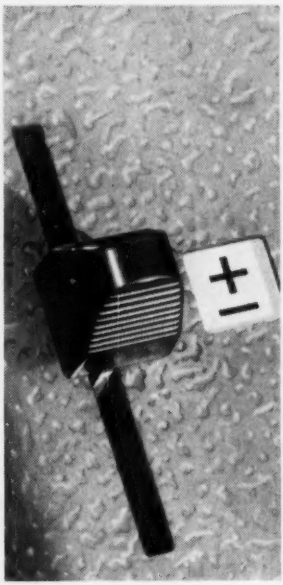
Eastman Kodak Co., 343 State St., Rochester 4, N. Y., makes an automatic slide projector that will repeat a slide presentation continuously. The Kodak

Victor's new, completely automatic printing calculator with the

New Simpla-Key

Lets you automatically multiply, add, subtract, or divide with a flick of One Key!

Flick Up to Multiply



Center to Add, Subtract

Flick Down to Divide

VICTOR Automatic Printing CALCULATOR

Imagine! Multiply, divide, add or subtract with the new Victor Calculator—all automatically! Just flick the Simpla-Key—enter figures as you'd write them—and the machine does the rest. Unbelievable!

A printed tape, with a true symbol, identifies figures entered and operation performed. See the unique Victor Calculator today. Convenient terms. See "V" for Victor in the adding machine section of the Yellow Pages.

VICTOR ADDING MACHINE CO., CHICAGO 18, ILL.

Victor Adding Machine Co., (Canada), Ltd., Galt, Ont.

Manufacturer of Business Machines, Cash Registers, Business and Industrial Systems, Electronic Equipment, Electri-Cars.

Victor Adding Machine Co., Dept. O-559
Chicago 18, Illinois

Send me complete new brochure on Victor Automatic Calculator.

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Company Name_____

Address_____

City_____ Zone____ State____

For More Information Circle No. 350

TO USERS OF DIRECT PRINT COPY MACHINES:

Specially designed for Bruning, Ozalid and other diazotype copying machines, Patapar Translucent Parchment originals produce copies that are unbelievably sharp and clear. What makes the difference? It's Patapar's unique, fiber-lock texture and uniform, high degree of translucency.

Patapar Translucent originals are furnished in various sizes and weights, including rigid card stock.

FREE SAMPLES—Ask us to send you brochure of samples. *Test them and see the difference!* Write us on your business letterhead. Name of nearest distributor on request.

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TRANSLUCENT PARCHMENT

PATERSON PARCHMENT PAPER COMPANY
Bristol, Pennsylvania
Sales Offices: New York, Chicago
West Coast Plant: Sunnyvale, California

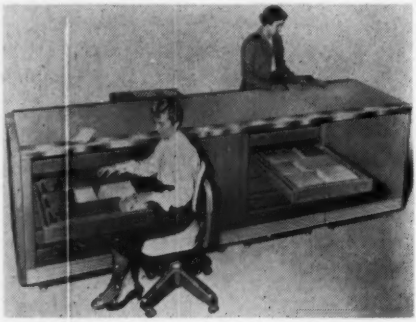
SPECIAL PAPERS FOR SPECIAL PURPOSES

For More Information Circle No. 456

Cavalcade Repeating Projector, Model 540, automatically cycles through presentations of up to 40 cardboard-mounted slides, or 30 in glass mounts, and may be used with synchronized sound to provide flexible messages with the interest of a motion picture. It changes slides automatically at 4-, 8-, or 16-second intervals, as desired. A steel frame protects the slides, and they are never touched by projector mechanism. A choice of lenses of 3", 4", 5" and 7" focal length is offered. Projector is equipped with color-corrected Kodak Projection Ektanon Lens, 4", f/3.5. A high-low switch lets user select 300- or 500-watt illumination. Provision for connection of certain continuous tape recorders which, in addition to audible commentary, can carry silent signals which change each slide at exact moment desired. Built-in douser keeps screen dark between slides. No slide movement is visible. A rugged universal motor runs projector on household current (50 or 60 cycle AC). Hinged cover lifts when it is necessary to replace a lamp or clean condensers. The compact Repeating projector is 7" high, 12" wide and 13" long, is finished in black, and has a rugged gray case. Model 540 lists at $199.50. **For More Information Circle 169.**

TAB CARD FILES

Wright Line, Inc., 160 Gold Star Blvd., Worcester 6, Mass., manufacturers of data processing accessory equipment, has im-



proved its Custom File Line, designed for high capacity filing. These files place a large volume of cards within easy reach

Listen to

DeJUR GRUNDIG Stenorette®

the complete dictating-transcribing machine with revolutionary magnetic tape

The miracle is Stenorette, the truly modern dictating-transcribing machine that gives you more efficiency and economy than any other dictating machine in the world. Here's why. Stenorette uses miraculous Magnetic Tape, and *only* a *magnetic* medium can give you error-free dictation...the economy of using it over and over again...the freedom to record, erase, re-record with the flick of a switch. And you can dictate continuously for as long as 45 minutes! Mister, *this* is a miracle!

Why don't you try this miracle for *your* company. Hundreds of thousands of satisfied owners demonstrate why Stenorette is the fastest growing complete dictating-transcribing machine today...the easiest-to-use...the most economical... the instrument that lets you "Measure Time With Tape." There are more Stenorettes sold in the United States than all other magnetic dictating machines *combined*.

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THERE'S MAGIC UNDER YOUR THUMB.

The Stenorette microphone puts magic right in your hand. *One* button—under your thumb, lets you dictate, stop, erase a word, correct a sentence, change whole paragraphs...continue dictating exactly at the spot you left off! It's all done with the flick of a finger—you don't even have to touch the machine!

Dictate and transcribe with this ONE *miracle push-button machine.* **$179.50***

*Complete with dictating or transcribing accessories. plus F.E.T.

MAIL COUPON NOW—END DICTATION TIE-UP

DeJUR-AMSCO CORPORATION, Dept. 916
Business Equipment Division
45-01 Northern Blvd., Long Island City 1, N. Y.

Gentlemen:

We want proof of Stenorette's economy and versatility.

☐ Send me Free Booklet "How To Measure Time With Tape."

☐ Let's Have a demonstration with no strings attached.

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Company _____

Address _____

City _____ Zone ____ State ____

For More Information Circle No. 387

For the "Up-to-date" and the "Up-dated" office.

PEAK EFFICIENCY with modern P.E.C. 'MATIC' posting equipment

P.E.C. keeps pace with modern office methods

DUO-MATIC POSTING TRAYS AND STANDS

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TILT-O-MATIC TRAYS (For Register Forms)

V-MATIC TRAYS (Small Capacity Containers)

HANDI-MATIC TRAYS (For writing board and machine accounting records requiring small capacity containers.)

Write today for complete catalog

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GOVERNMENT REPRESENTATIVE
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WASHINGTON 6, D. C.

For More Information Circle No. 402

of an operator who can refer to them without moving from her place, reducing office traffic and wasted motion. Custom Files are available for horizontal and vertical applications. All have smoothly-operating, full suspension cradles with safety locks on all cradles to prevent more than one from opening at any time, and stability base for operator safety. Roll-Wright covers protect cards when not in use and make file room more attractive. Many flexible combinations of Custom Files are available, allowing the purchase of only what is currently needed. **For More Information Circle No. 147.**

READ-OUT PRINTER

Clary Corp., 408 Junipero St., San Gabriel, Calif., makes a read-out forms printer with a 12-decade capacity and an automatic forms ejector. This Clary Model 1941 is an extension of the Clary Parallel Entry Data Printer with a paper

transport mechanism which precisely positions pre-printed forms. Typical applications for the Model 1941 are recording automatic check-out data, logging instrumentation data, recording quality control reports, automatically recording inspection records, printed gummed labels and inspection tags. An original and three copies can be printed on carbonless paper in either 3½" x 7" or 3½" x 3½" sizes at the rate of 2½ lines per second. Equipped

NOW! for the first time

a portable electric collator for $149.50

Now for the first time *ever* a portable electric collator that is actually *half the price* of anything on the market. Capable of unusual high production, this new collator has the capacity to handle 8½" x 11" sheets of the normal range of office and duplicating stocks. It's portable, light weight and extremely easy to operate. A simple flip of the switch turns the tiresome time-consuming task of hand gathering duplicated pages into sets into an efficient, effortless job . . . *that's almost fun!*

Ideal for every office . . . easily moved from department to department . . . perfect for sales bulletins, promotional material, price lists and other data.

Mail coupon . . . or ask your stationer or office equipment dealer to arrange for a free demonstration right in your own office.

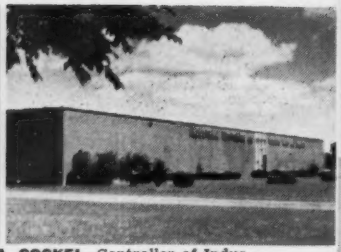
THOMAS COLLATORS INC.

Thomas Collators Inc.
Dept. B, 100 Church Street, New York, N.Y.

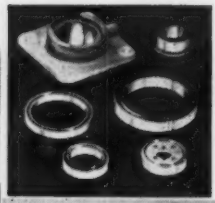
☐ Sounds good . . . send literature!
☐ I'd also like a free demonstration.

NAME _____
(please print)
COMPANY _____
ADDRESS _____
CITY _____ STATE _____

For More Information Circle No. 297



ROBERT A. GOCKEL, Controller of Industrial Tectonics, Inc., Ann Arbor, Michigan.



PRECISION BALLS AND BEARINGS produced by this company are used by many industries.

A NATIONAL SYSTEM modernized the accounting department of this growing concern.

"Our *National* System saves us $14,500 a year... pays for itself every 6 months."

—Industrial Tectonics, Inc.
Ann Arbor, Michigan

"The rapid expansion of our business demanded a full-scale improvement of our accounting procedures," writes Robert A. Gockel, Controller of Industrial Tectonics, Inc. "Our National System gave us many advantages and benefits, yet cut operating costs.

"Our National Class 31 Accounting Machine offers amazing flexibility and accuracy. We now have detailed reports on all departments, and thus greater production control. Our sales and operation records are more up-to-date and accurate. And our National's speed has eliminated overtime.

"We're convinced that our National System is the best accounting system available. Records show it saves us $14,500 a year...pays for itself every 6 months."

Robert A. Gockel
Controller of
Industrial Tectonics, Inc.

Your business, too, can benefit from the time- and money-saving features of a National System. Nationals pay for themselves quickly through savings, then continue to return a regular yearly profit. National's world-wide service organization will protect this profit.

75 YEARS

THE NATIONAL CASH REGISTER COMPANY, *Dayton 9, Ohio*

1039 OFFICES IN 121 COUNTRIES
75 YEARS OF HELPING BUSINESS SAVE MONEY

*TRADE MARK REG. U. S. PAT. OFF.

National

ACCOUNTING MACHINES
ADDING MACHINES · CASH REGISTERS
NCR PAPER (NO CARBON REQUIRED)

For More Information Circle No. 278

with an electrically controlled dater independent of data columns, the solenoid-operated printer weighs 40 lbs. and measures 20" x 11" x 9". **For More Information Circle No. 120.**

SPIRIT DUPLICATOR

Ditto, Inc., 6808 McCormick Rd., Chicago 45, Ill., introduces the 14D75, latest addition to its line of seated-posture, Direct Process duplicators. Every element is designed to make its sit-down operation as comfortable as it is efficient. Foot pedals are readily adjustable in two directions to fit tall or short operators.

There is a No Pour fluid supply with visible fluid gauge. Liquid is pumped directly from the container in which it is received, and distributed selectively. The operator can switch from large sheets to small ones as quickly as she can flip the fluid clips. This allows running labels and other small documents in succession with larger forms. Speed of the 14D75 is 120 copies per minute. Magnetic drum facilitates making blockouts on copies. Magic Copy Control insures uniform brightness of copies. Segmented master clamp makes it easier to handle variable masters. A lever for continuous feeding also can be operated in single revolutions with either

Mail Cart!

Put efficiency in your mail operation! This double-deck polished aluminum mail cart by Chesley lets your mail department categorize incoming mail for quick, error-free delivery. Lower basket for out-going mail. Both baskets are removable.

BASKET SIZE—(Upper) 17½x25x11; (Lower) 17½x25x8 FRAME—High Polished Aluminum • BASKETS REMOVABLE SHIPPING WEIGHT—33 lbs. • PRICE—$45.00 • TERMS 1% 10 days, net 30 days • F.O.B. Detroit.

File folders to fit guide bars — $.24 ea.

Write for free brochure — or, better still — order today!

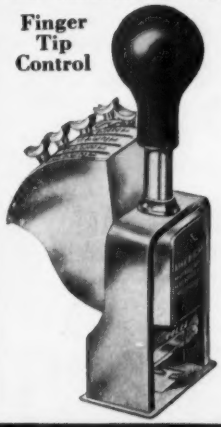
Chesley Industries, Inc.
24777 Telegraph Road, Detroit 41, Mich.

For More Information Circle No. 414

AMERICAN SPEED SET

Gear Construction Numbering Machines

Finger Tip Control



Model 43

Wheels engraved with figures, letters, fractions, etc.

Any Number Quickly Brought Into Printing Position

WRITE FOR SPECIAL FOLDER

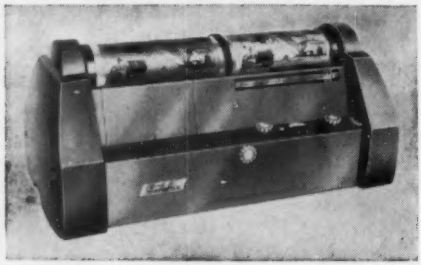
AMERICAN NUMBERING MACHINE CO.
ATLANTIC AND SHEPHERD AVENUES
BROOKLYN 8, NEW YORK
BRANCH—105 W. MADISON ST., CHICAGO 2, ILL.

For More Information Circle No. 415

hand-trip or foot pedal to feed one sheet at a time. Pedal controls speed production by freeing the operator's hands for faster, more accurate handling of forms. Receiving tray is at an angle which gives seated operator a clear view of finished work. Paper feed calibrations are at the front end of the feed tray, within easy sight of operator. The 14D75 handles forms from 3" x 5" to 14" x 14". It provides positive registration for exact placement of copy data Velvet Clutch allows silent, smooth stops. Optional equipment includes ream-feed paper guides, receiving stacker, and new systems tray. **For More Information Circle No. 188.**

ELECTRONIC STENCIL CUTTER

Gestetner Duplicator Corp., 216-222 Lake Ave., Yonkers, N. Y., announces the Gestefax which will reproduce any subject: photographs, forms, drawings, letters, etc., directly on a mimeograph stencil. The stencil is then immediately ready to reproduce as many copies as desired, each a faithful reproduction of the original. Proofreading is completely eliminated, because the stencil is an exact copy of the original. This liberates the stencil duplicator from the typewriter as its source of composition, providing the same freedom



of expression as does the offset duplicator has using the camera as a means of transferring layout to plate. However, there is no camera, darkroom, chemicals, negatives nor trays. The Gestefax fits on any desk and does the job silently, swiftly and automatically. The paste-up technique of preparing layouts can be used for the

For More Information Circle No. 420

SPACEFINDER FILES...

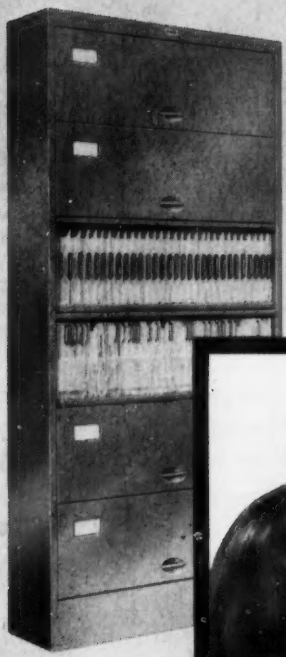
HAVE PROVEN, in hundreds of offices, that they can SAVE YOU 50% or more in filing time, space and money!

ONLY SPACEFINDERS offer these advantages:

WELDED CABINET designed specifically for maximum filing efficiency.

FILE CAN BE MOVED WITH CONTENTS INTACT. Rugged Spacefinders are shipped complete and ready to use.

DOORS GIVE DUST, DIRT AND FIRE PROTECTION – serve as pull-out work shelves, and can be provided with locks.



An appearance asset to any office.

Instant visibility and availability for thousands of records.

TAB
PRODUCTS CO.

Send to Dept. O, Tab Products Co., 995 Market St., San Francisco 3, for 24-page catalog and name of our local representative for full information on Spacefinder savings.

For More Information Circle No. 282

mimeo process. Anything which can be composed on paper with pen-and-ink, scissors and paste-pot, can be run on a stencil duplicator. **For More Information Circle No. 181.**

COPYHOLDER

Remington Rand Div., Sperry Rand Corp., 315 Fourth Ave., New York 10, N. Y., announces the Foldamatic Line-a-Time Copyholder which is expected to increase a typist's performance up to 20% or more. It continues the Line-a-Time principle of forward reading, which permits the secretary to type with her head in a natural forward position, eliminating neck and back-ache, eyestrain and tension. The Foldamatic feeds and handles single sheets as well as typist's notebooks, cards or large accounting statements. Its Transvue Line Guide allows the secretary to see several lines ahead as well as underscoring the line she is typing. Available in 16" or 25" size, in six colors, matching and harmonizing with typewriter colors: French gray, desert sage, honey beige, mist green, lime-light, white sand. Priced at about $55, other features include: positioning scales (pica and elite) which enable the typist to compute tab and margin sets without disturbing paper

in the typewriter; copy grips to secure steno book or single sheet of paper; variable height adjustment bars to raise or lower the unit to suit eye-level; paper twirl knobs to facilitate rolling of copy material; variable space selector unit

STEVENSON & SMITH, INC.

LEADING MANUFACTURERS OF

Intricate, Accurate, Economical

SPECIALTY

Multi-Part Business Forms

Stevenson & Smith, leading business forms manufacturers and business systems creators, are represented, coast to coast, by outstanding Business Forms dealers and systems analysts.

Write for name of your nearest representative.

STEVENSON & SMITH, INC.
Lackawanna Place
BLOOMFIELD, NEW JERSEY

For More Information Circle No. 430

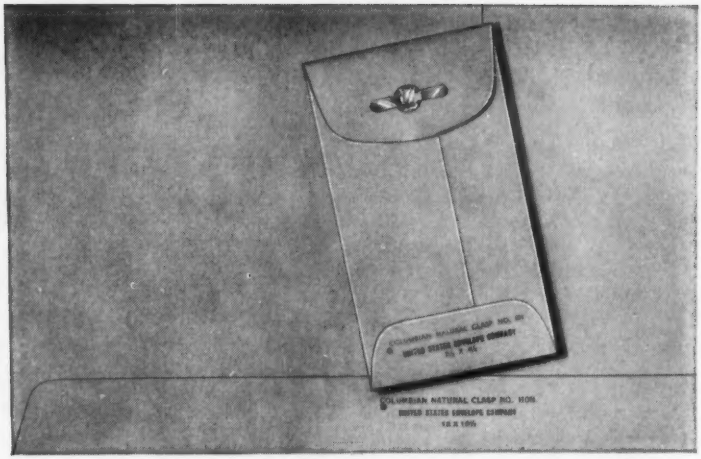
BEVCO-Tubular Steel Costumers
New "Row of Hooks" 2'-6' lengths
New Super-Deluxe Hangers

Mirror-like gleaming Chrome or Lacquer finishes. New "Row of Hooks" attach on standard 16" centers. Use individually or as an accessory to BEVCO Wall Racks as illustrated, $1.25 per foot. Indestructible tubular steel Hangers in Chrome or never tarnish Brass color.

Immediate Delivery

BEVCO Precision Manufacturing Co.
831 Chicago Ave., Evanston, Illinois

For More Information Circle No. 429



"That's right, George! Always look for the name Columbian® Clasp."

"It identifies the handiest envelope in the world . . . used everywhere to mail things, package things, or just to tote 'em around! It's made in 24 sizes, from the midget to the giant."

There are good reasons why you, too, should look for the name. It identifies the genuine Columbian Clasp envelope, made of extra strong Kraft paper in natural color or glazed brown; an envelope of guaranteed uniform quality, with wide seams, reinforced hole and securely anchored metal clasp which can be bent up and down many, many times without breaking.

UNITED STATES ENVELOPE COMPANY

Springfield 2, Massachusetts . . . Divisions from Coast to Coast. U.S.E. makes more envelopes for more people to use in more ways than any other manufacturer in the world. Also Paper Cups, Transparent Containers and Linweave Quality Papers and Envelopes.

For More Information Circle No. 273

3 styles of STANDARD ROL·DEX

for fast, economical record handling

records roll to the clerk!

Rol•Dex, Jr.
Model RS-53

SMALL volume record handling. The Rol•Dex, Jr. – only slightly larger than a wheel file, has the advantages of much faster filing-greater capacity-variety of card sizes in the same unit-availabilty of records to outside reference. Designed for 2,000 to 12,800 records.

MEDIUM volume record handling. Up to 35,000 tab cards in Model RL-73. Other models for 5"x3" and 6"x4". A compact work center with rolling work shelf for the seated clerk.

LARGE volume record handling – extra filing space in the RC-Series. Will house tab cards (horizontal or on end) 8"x5" cards; 6"x4" cards, 5"x3" cards and MIB (2¼"x3") cards.

Model RC-73

Send coupon for free literature

Pat. and Pats. Pending

ROL·DEX

WATSON MANUFACTURING COMPANY, Inc.
Rol•Dex Division, Dept. O-5, Jamestown, N. Y.

Please forward literature on ROL•DEX Standard Units

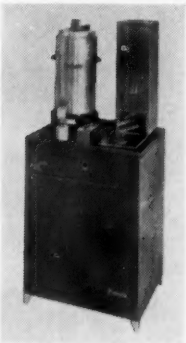
Name_____ Title_____
Company_____
Street_____
City_____ State_____

For More Information Circle No. 303

which makes possible spacing to any desired point, not just according to typewriter line. **For More Information Circle No. 205.**

COFFEE MAKER-VENDOR

Perk-Ette, Inc., 1616 S. Michigan Ave., Chicago, Ill., offers the Perk-Ette automatic coffee brewer. This compact unit occupies only 3 sq. ft. of floorspace and is designed for offices and plants employing 20 to 100 people. Perk-Ette automatically brews hot, fresh percolated coffee at any time with constantly refrigerated fresh cream. The equipment can be operated with or without coins. It plugs into any ordinary wall outlet.



No water connections or drains are required, and it is completely sanitary. Since Perk-Ette is completely automatic, there is no time or labor lost in preparation, operation, or delivery. **For More Information Circle No. 157.**

REPRODUCTION MASTERS

Columbia Ribbon & Carbon Mfg. Co., Glen Cove, N. Y., has developed a method of preparing master copies of drawings or typed matter for reproduction on many types of duplicating and reproduction machines. The system produces positive and negative masters simultaneously. The positive master is a translucent sheet of matte finish film; the negative, a tracing carbon based on plastic instead of paper. When the sheets are backed up, impressions made

For More Information Circle No. 421

SYNTRON

Vibrating

PAPER JOGGERS

Save time — reduce costs
Speed aligning stock for easier handling and for automatic operations

SYNTRON Paper Joggers increase the efficiency of many office operations by jogging material to perfect alignment for easier handling—checks, punch cards, invoices, material for filing, microfilming, manual assembly, etc.

SYNTRON Paper Joggers are efficient and dependable. Rate of vibration or amplitude is instantly adjustable.

Electromagnetic, they will last indefinitely when operated under normal conditions, and require a minimum of maintenance.

You will save time and cut cost when you use SYNTRON Paper Joggers.

Write for catalog data—FREE

SYNTRON COMPANY
715 Lexington Ave. Homer City, Penna.

For More Information Circle No. 410

on the translucent film transfer a positive carbon image to the matte finish side, leaving a negative effect on the carbon sheet. Impressions are sharp and clean and, when using a positive master, background tone can be eliminated or considerably reduced without sacrificing machine speed. Impressions made on the matte finish film do not smudge or smear, but can be readily removed with a correction fluid. The film is dimensionally stable, moisture-resistant, and tough enough to withstand the handling required. The system is adapted to the preparation of offset and spirit masters as well as other copying and reproduction operations. **For More Information Circle No. 224.**

BOOK, CATALOG STANDS

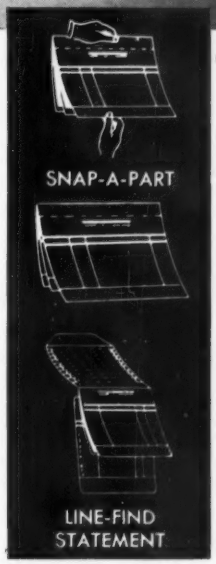
Stempel Mfg. Co., 2830 Roberta St., Dallas 3, Texas, makes two Stempco Book and Catalog Stands in three natural wood finishes: oak, imitation walnut, and genuine walnut. Series 1220 has a 90° book

trough at both bottom and top. Series 1210 has the book trough at the bottom and two flat shelves at the top with a 4½"-space between. Both styles in all finishes are available with or without casters. All have 25" of usable shelf space at each level. Smooth machine-sanded surfaces of selected kiln-dried hardwood are hand-filled and finished like fine furniture. The wood is preservative

Why wait 4 to 6 weeks for those forms you need tomorrow? We reproduce your logo, photos, etc. by fast lithography on tabulating, snap-a-part . . . voucher checks . . . and many stock forms for every type business . . . on N C R Paper or carbon interleaved.

We run day and night to assure filling orders fast at no extra charge.

For the name of your nearest Modern Business Forms distributor, write, wire or phone—



modern
BUSINESS FORMS
MANUFACTURING COMPANY
333 West Court St., Cincinnati 2, Ohio
Phone: GArfield 1-7111 Telefax FBD

For More Information Circle No. 268

treated to prevent shrinking, cracking and warping. Use of long steel screws in assembly assures a strong and durable product. Overall dimensions are 14" x 26½" x 30" high without casters, 32½" with casters. **For More Information Circle No. 208.**

FORMS BURSTERS

Uarco, Inc., 7902 S. Ashland Ave., Chicago 20, Ill., announces a forms burster equipped with a high efficiency trimmer capable of trimming up to 12 plies of fastened control-punched forms. The unit trims and bursts continuous forms 3" to 17" in length at 90 ft. per minute. A larger model accommodates forms up to 22" in length at the same speed. The bursters are designed to handle all forms now in common use or contemplated in the foreseeable future. Trimming is accomplished by two large shearing wheels that cut margins cleanly and accurately within a tolerance of 1/64".

These wheels are protected by transparent plastic shields that cover the mechanism and assure trouble-free operation. Two pinfeed units hold forms in perfect alignment. Trimmers can be adjusted to trim

NEW

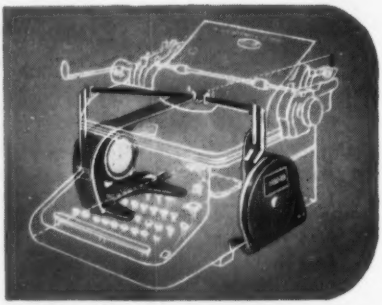
CARBO—RIB

ADAPTER • Converts any make of typewriter to carbon paper ribbon use!

Fits on any typewriter, manual or electric, regardless of width of carriage • Easily attached in seconds without the use of tools • Makes old typewriters write like new • Prevents clogging of type • Saves on investment • Allows production of more and clearer carbon copies • Impressions always uniform with no fading • Price $49.50, no fed. tax.

Money back guarantee. Send for Brochure "A"

NETTLE MANUFACTURING CO.
27 Huntington Ave., Boston 16, Mass.



For More Information Circle No. 408

DISTINCTIVE ENGRAVED DESK SIGNS

Increase personnel "prestige" and promote office efficiency! Made of laminated bakelite, 1½ x 7½, permanently engraved and inserted in a crystal Plexiglas base. Panel available in black, gray, green, red, walnut and mahogany with white letters. Attractive and easy to clean. Order yours today!

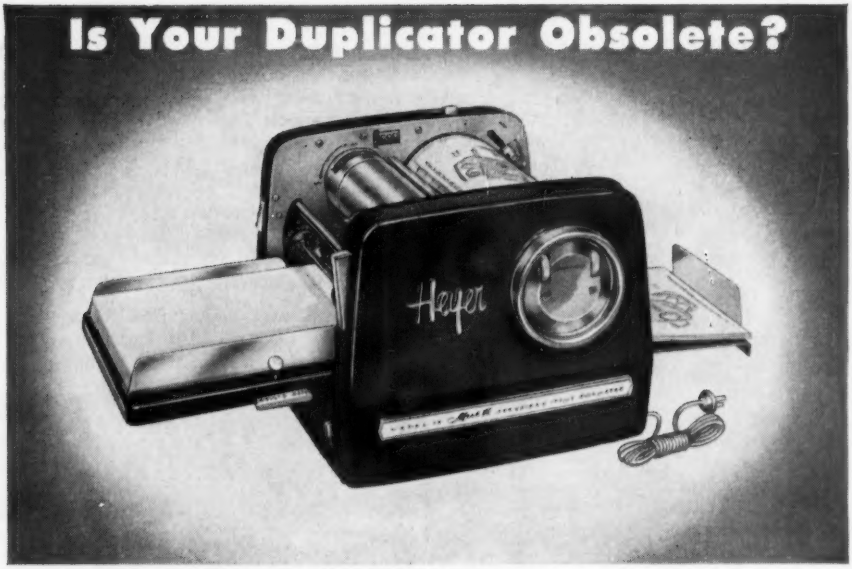
Only $2.50 ea.
6 or more $2.00 ea. F.O.B. Chicago
25% deposit required on all C.O.D. orders.

Send for complete catalog and quantity price discounts.

PLASTIC LETTER INDUSTRIES, INC. • 190 N. Wells, Chicago 6, Ill.

For More Information Circle No. 409

Is Your Duplicator Obsolete?



Compare the advantages of the NEW Heyer Mark III CONQUERORS®

Check your duplicator for these signs of wasteful obsolescence

- ☐ Can't handle papers from newsprint to cards
- ☐ Can't raise or lower copy on sheet
- ☐ Doesn't have perfect registration
- ☐ Doesn't feed to last sheet
- ☐ Has tricky side rubber adjustments
- ☐ Can't produce 110 copies a minute
- ☐ Doesn't have reset counter to conquer paper waste
- ☐ Doesn't have visible fluid supply
- ☐ Doesn't have fluid control
- ☐ Doesn't have pressure control
- ☐ Doesn't have feed tension control
- ☐ Doesn't have permanent instructions on machine
- ☐ Copies come out face down

Heyer didn't set out to make any duplicator obsolete. Our aim was to build a machine that would do more than any other—things others thought impossible—and to price it more attractively.

To do this we incorporated such important features as Copy Positioner Control for easy raising and lowering of copy on a sheet—Visible Fluid Supply to show fluid level at a glance—Permanent Instructions, *right on the machine*—and a highly visible reset counter to conquer paper waste. On electric models, we added Automatic Start-Stop to eliminate trouble caused by forgetting to shut off the motor.

These and the new Mark III improvements give you the answer to *all* your duplicating problems. Our new paper feed with Tension Control eliminates tricky side-rubber adjustments, efficiently feeds newsprint to postcards—even when cut unevenly!

All Conquerors print 330 copies in 3 minutes of anything written, typed or drawn on a spirit master—1 to 5 colors at once—3 x 5 to 9 x 14 in. size. Backed by 56 years of Heyer duplicator know-how, they're low in original cost, low in operating cost, low in maintenance.

Available in electric or hand-operated models.

YOU BE THE JUDGE!
Mail coupon today for complete details.

The HEYER Corporation Dept. O-5
1821 S. Kostner Ave., Chicago 23. Ill.

Gentlemen:
Please RUSH my FREE Catalog and information about a ONE WEEK FREE TRIAL

Name _____
Company _____
Address _____
City _____ Zone ____ State _____

See them at the NOMA Convention, New Orleans, May 25-27

For More Information Circle No. 340

BEAUTY AIDS

for both the girl... and the letters she types!

Cosmeticians supply beauty aids for the girl. A.W.FABER provides beauty aids for the letters she types.

Houdini himself couldn't have done a clean erasing job with a bulky eraser. That's why A.W.FABER invented ERASERSTIK—a slim, trim, white-polished beauty that takes out a single letter without smudging the whole word. With ERASERSTIK you erase without a trace. Attractive girls generally turn out attractive letters. That's why we sell so many ERASERSTIKS. Get some, girl!

Which point do you prefer?

Slender, Medium or Blunt..... The choice is yours. EraserStiks 7099 and 7099B can be easily pointed with a mechanical or hand sharpener to suit your taste.

For More Information Circle No. 378

one, both, or neither control punched margin. A burster with high efficiency trimmer used with the Uarco Deleaving stand permits completely mechanized trimming, bursting, and deleaving of carbon from fastened or unfastened forms in one continuous operation. **For More Information Circle No. 164.**

COLLATING RACK-TRAY

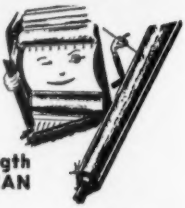
Evans Specialty Co., Box 8128, Richmond, Va., has added a Receiving Tray, to speed and simplify paper collating, to

its line of office accessories. Made of lightweight aluminum, it is used with the Evans Gathering Rack. As groups of

ATT: MULTILITH OPERATORS

TRY IT — *FREE!*

Tell us the name of your press—we'll send a FREE SAMPLE of the



TWO-SIDED CLEAN-UP SHEET

with added wet strength which gives you CLEAN INK ROLLERS —

QUICKLY—EASILY—ON THE PRESS!

It's SPEEDY-Mat

You'll cut wash-up time, get longer roller life. For Multilith 1250 (slotted and pin bar), ATF-15, A. B. Dick 350, Davidson Duplicators.

DIRECT IMAGE

Aluminum Plate & Supply Co.

5829 E. Beverly Blvd., Los Angeles 22, California

Ask about the new, improved "DUO-LIFE" DOUBLE-WEIGHT MOLLETON COVERS, too!

For More Information Circle No. 477

This new kind of carbon paper won't slip— won't curl—won't smudge

Here's what people tell us they like about Roytronic:

It won't slip. Even in fast-moving electric typewriters.

It won't curl. Roytronic is specially coated so it won't curl.

It won't smudge. Roytronic doesn't leave roller marks and won't rub off on fingers. That's why it gives you crisper, cleaner copies.

It comes in a handy Carbon-Keeper* Box, designed to fit neatly into the stationery slots in a desk.

And it's economical, too, because Roytronic Carbon Paper lasts longer.

For free sample, fill out coupon and mail with your company letterhead.

ROYTYPE®

carbon papers, ribbons, quality supplies for all business machines

Products of Royal McBee Corporation, World's Largest Manufacturer of Typewriters.

*Patent applied for.

FILL OUT AND MAIL THIS COUPON

MR. ROY TYPE, c/o Royal McBee Corporation, Department M, Port Chester, New York

Please send FREE samples of ROYTRONIC to:

Your Name_____

Firm Name_____

Street Address_____

City_____ **Zone**_____ **State**_____

For More Information Circle No. 281

"As every thread of gold is valuable so is every moment of time."

—J. MASON

Let an Ever Ready help conserve your time. There is a style for every desk . . . at home or in the office.

"55" Series
Pad sizes: 5" x 8"
Molded base in Walnut, Grey, Mist Green or Desert Sand

"717" Series
Pad sizes: 3⅝" x 6"
Molded base in Walnut, Grey Mist Green or Desert Sand

"610"
Pad sizes: 6" x 10"
Steel base in Brown only

"313" Series
Pad size: 3" x 4"
Molded base in Walnut, Grey Mist Green or Desert Sand

Always ask your stationer for Ever Ready desk calendars... just a little better in every way.

The EVERREADY Calendar

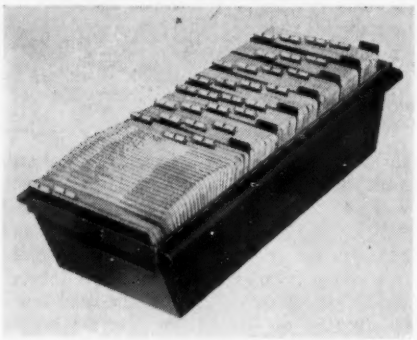
EVER READY CALENDAR MANUFACTURING CO.
150 BAY STREET • JERSEY CITY, NEW JERSEY

For More Information Circle No. 372

papers are assembled from the rack, they are dropped criss-cross into the Receiving Tray in neat sets, ready for removal and stapling. Rack and tray are estimated to cut collating costs 2/3. **For More Information Circle No. 216.**

VISIBLE CARD FILES

Business Efficiency Aids, 8114 Lawndale Ave., Skokie, Ill., makes Magne-Dex visible card files in which permanent magnetic repulsion separates the cards for visibility, and fast finding and filing. Headings on from 15 to 20 cards become instantly visible when operator touches any part of the file. Magne-Dex trays are made



for all card sizes in a wide range of capacities. Tub desk files are also available. Magne-Dex cards come in white and colors, and in 13 standard sizes for all requirements. The cards are indexed and processed like any file card; only their movement in the file distinguishes them from ordinary cards. For literature explaining the Magne-Dex principle, and showing the various types of cards and equipment available, **Circle No. 221.**

UPHOLSTERY FABRIC

Plymouth Rubber Co., Canton, Mass., makes Algiers Elastic Plyhide with Nylon reinforcing. It looks like leather and its permanent beauty lends an authentic touch of richness to office decor. The fabric's

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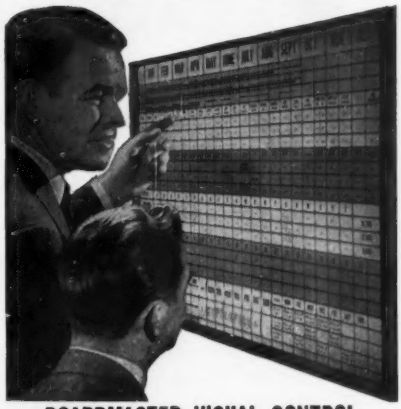

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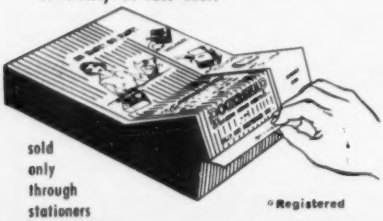

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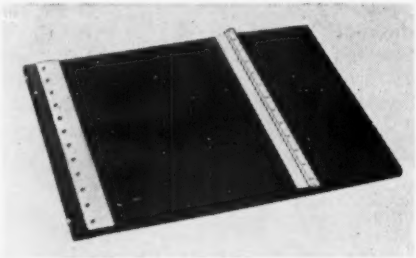
ACCOUNTING BOARDS

Nardon Mfg. Co., 2125 W. Mission Road, Alhambra, Calif., makes all-metal Narco Accounting Boards with movable or fixed rails. The vertical indexing mechanism is automatically controlled, and horizontal adjustment of rail centers provides correct registration of forms despite paper



shrinkage. The lightweight anodized aluminum boards in neutral gunmetal finish, will not chip or mar, and provide an ideal flat writing surface. Collating rails and pegs are polished stainless steel. One-piece rail and peg construction prevents loosening or loss of pegs. Rails can be used interchangeably in any channel on the board. Positive locking device holds rails in exact registration, preventing them from accidentally falling out of channels. Movable rail boards are made in five standard sizes; fixed rail boards in three sizes. For illustrated literature showing all boards and components, **Circle No. 136.**

TECHNICAL FOUNTAIN PEN

Alvin & Co., Inc., Windsor, Conn., offers the Techagraph technical fountain pen designed for fast precision pen work.

It may be filled directly from any ink bottle and provides a large, continuous supply of ink, eliminating constant refilling. Suited for offset printing and Thermo-Fax

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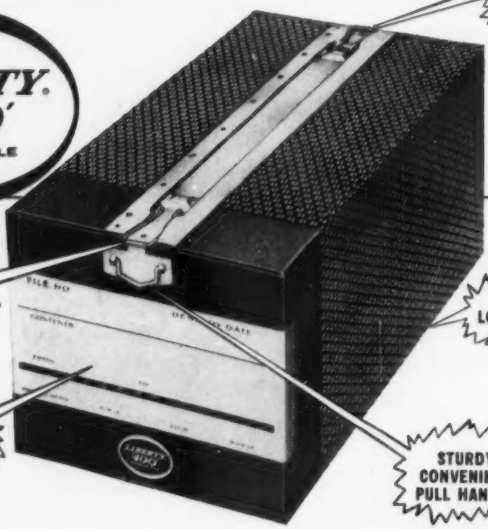

The storing and housing of inactive office records is made easier, more convenient, with the new Liberty '400'.

End-Product of a 2-Year Development Program, the NEW '400' File brilliantly solves the objectives of quick, easy **Positive Locking . . . Flat Top Closing . . .** of **One-Piece Construction** . . . and of handsome **Front Office Appearance.**

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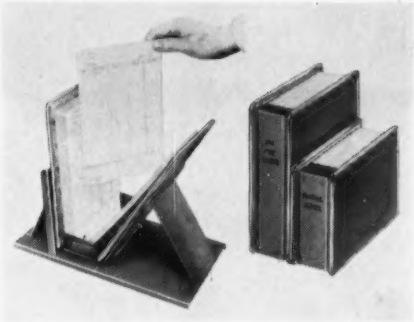
specializing in record storage equipment since 1918

For More Information Circle No. 349

reproduction, duplicating, etc. It will not leak nor clog. Separate nibs are available in six line widths from super-fine to extra-broad. Refill cap is permanently attached and plunger stops automatically. Window makes ink supply visible. Almost all types of ink can be used. Packed in a plastic case with sponge lining that prevents drying and makes nibs always ready for instant use. Humidor container keeps nibs fresh for weeks. Case contains nib cleaner, instructions, guarantee and rubber socket wrench for changing nibs while pen is full without damage to stylus point. A complete range of lettering guides is also available for use with the pen. Price of pen, complete with case, $4.75. Additional nibs $1.50 each. **For More Information Circle No. 213.**

POSTING TRAY-BINDER

Master-Craft Corp., 831 Cobb Ave., Kalamazoo, Mich., makes the Rocket Tray-Binder for machine posted ledgers that cannot be advantageously protected in a conventional tray. The binder, on this posting rack, is transformed into an efficient posting device, affording full visibility of accounts. When posting is completed, forms are instantly bound in the book for easy reading. Binder lock is



automatic and may be locked and unlocked without any adjustment. Binder is suitable for earnings, general, cost and expense ledgers and other confidential records. Available for any sheet size and in capacities up to 4". The light aluminum

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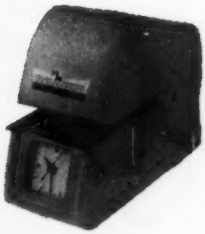

HELLER ROBERTS

Manufacturing Corporation

This new Roberts Model HRTD combination time and date stamp with clock face is engineered with three simple balanced units—printing head, ribbon mechanism and electric drive. It utilizes a new hammer method of printing with automatic self-aligning platens for crisp, clear impressions. Instantaneous paper-trip operation. Solid construction and fine engineering of details such as deeply engraved solid brass wheels and positive ratchets. Offers great flexibility of printing space through use of slides, word rolls and fixed dies. Choice of three colors. One of a new and improved line of time stamps, daters and numberers bearing the name Roberts, famous for numbering devices since 1889. Write Roberts Numbering Machine Division, Heller Roberts Mfg. Corp., 700 Jamaica Ave., Brooklyn 8, N. Y.

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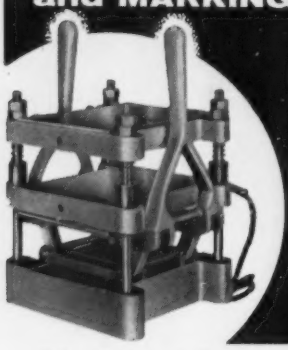
EVA-PRESS

MAKES YOUR OWN

RUBBER Stamps

and MARKING DIES



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For More Information Circle No. 457

rack fits binders of any size and weighs only 34 ozs. **For More Information Circle No. 192.**

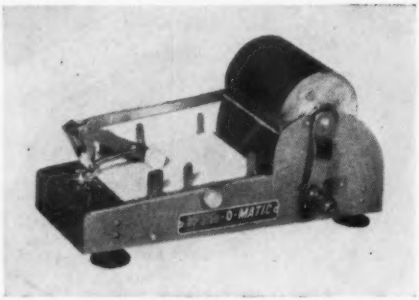
PAPER PUNCHES

New England Paper Punch Co., Natick, Mass., has incorporated a jam-proof feature in every model of its line of Clix Paper Punches. Because of this improved construction, Clix punches never need to

be taken apart and cleaned when clogged with wastepaper after extensive use. A simple lifting motion releases the jam and allows the work to proceed at once with no loss of time. Clix Paper Punches are made for every need. **For More Information Circle No. 156.**

STENCIL DUPLICATOR

Speed-O-Matic Co., 7640 W. Norton Ave., Hollywood 46, Calif., offers the Speed-O-Matic, a one-hand-operation stencil duplicator. Its features include 75-100



copies a minute and up to 5000 impressions per stencil on paper or card stock from 3" x 5" to 4" x 6". Machine adheres to any surface with its four rubber suction feet. Made of 18-gauge steel with all-

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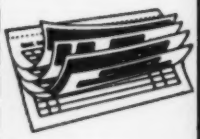

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- Avoid messy-smudging!
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For More Information Circle No. 406

chrome trim. Unit costs $21.95 with supplies; two-year guarantee. **For More Information Circle No. 152.**

RECORDING TAPE

American Recording Tape Corp., 6363 Wilshire Blvd., Los Angeles 48, Calif., makes magnetic recording tape under strict quality control to high precision and performance standards. Carefully tested throughout each manufacturing stage, this tape offers such electronic qualities as absolutely flat frequency response throughout the entire audio spectrum, extreme

sensitivity, fullness of sound and high signal-to-noise ratio. No plasticizer in the formulation prevents tape from drying out and becoming brittle, and provides for closer, more relaxed contact between tape and recording head, eliminating squeal or chatter across the head. Head life is prolonged by built-in lubrication to prevent excessive wear. The high iron load, uniformly dispersed in the formulation, provides a broader frequency response at lower speeds and a more efficient harmonic wave trap. Higher fidelity is thus assured. American Recording Tape is attractively packaged in cartons that can be opened with one hand without dropping the reel. An effective counter display

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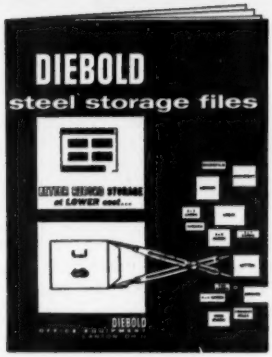

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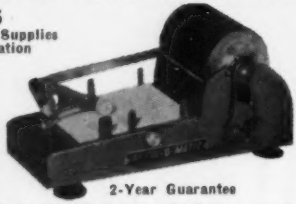

75 to 100 copies a minute. Up to 5000 impressions per stencil. Paper or card sizes up to 4" x 6". Sticks to any surface with 4 rubber suction feet. Precision made of 18-gauge steel, all chrome trim.

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Mounted on Swivel Brake Casters which allow the ladder to be rolled freely when no one is on it. When you step on the ladder the rubber cushioned legs rest on the floor and prevent rolling. Made in 13 heights — 4 widths. Send for Circular 56-O and prices.

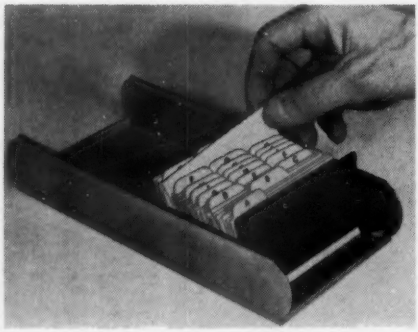
I. D. COTTERMAN, Mfr.
123 W. Spring Avenue
Naperville, Ill.

For More Information Circle No. 419

is supplied to distributors and dealers. Reels are of tear drop design with an easy load slot. Inquiries are invited from equipment manufacturers as well as from distributors and dealers. **For More Information Circle No. 102.**

BUSINESS CARD FILE

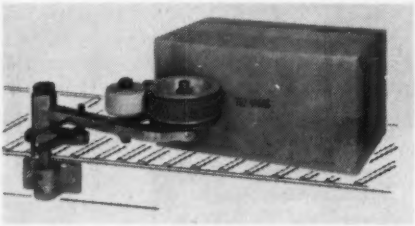
Hahn Co., Box 64532, Los Angeles 64, Calif., announces its Card Caddy, with alphabetical guides. It adjusts to hold few or many cards up to 3½" x 2". Handsome gold-tone aluminum for use on desk,



it also fits neatly in a top drawer. It has numerous other uses such as inventory, mailing lists, records, hobby, professional data. The Jr. size holds 750 cards and costs $2.49; Sr. size holds 1000 cards for $2.98, postpaid. **For More Information Circle No. 146.**

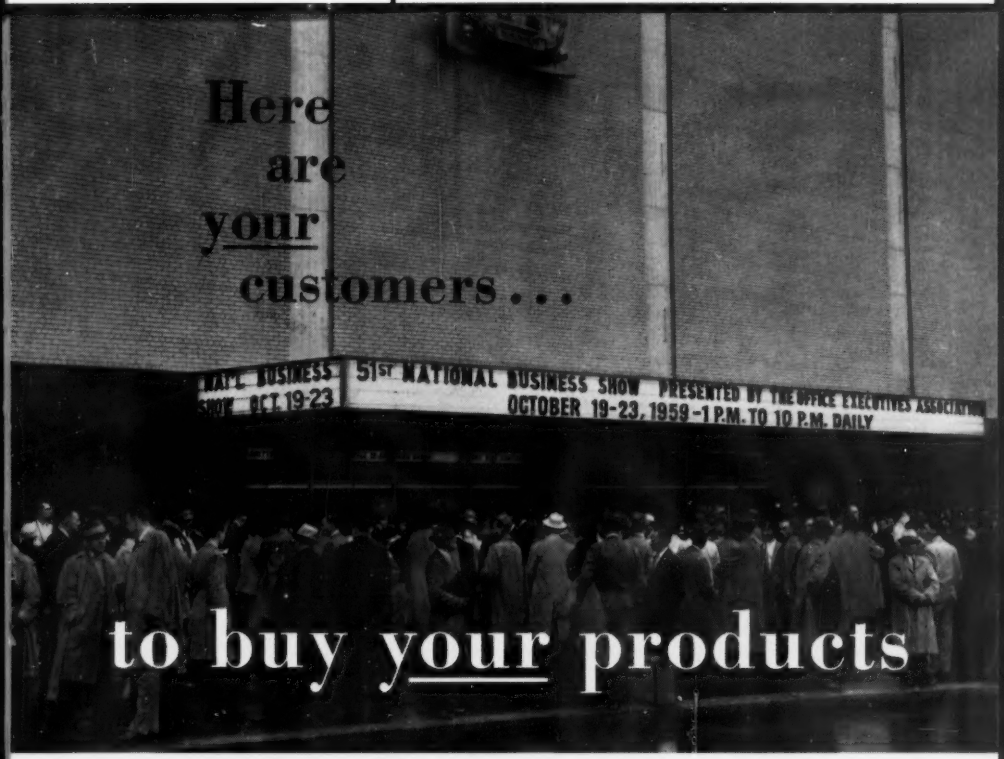
CONVEYOR LINE MARKER

Pryor Marking Products, 434 S. Wabash Ave., Chicago 5, Ill., offers the Rocket,



friction operated, self-inking conveyor line marker. Attaching to the conveyor line or case sealer, the automatic marker imprints

For More Information Circle No. 382



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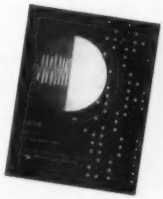
For complete details read the 20-page "Report to Exhibitors", containing all the facts and figures concerning the Show and its audience. It's free to interested businessmen, simply write or phone for your copy today.



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For More Information Circle No. 384

changeable data such as codes, dating, trademarks, etc., on cartons, bags, rolls, cans, drums, etc. Simplified design and engineering permit rapid, easy disassembly, easier ink filling and smooth, dependable operation. The unit may be easily and economically converted from a printing height up to 1″, to a model with a printing height up to 2″. The Rocket utilizes base-lock rubber types, permitting quick copy changes when needed. Available in original 1″ or 2″ printing height models, units may be used singularly or in multiple to mark both top and sides or two sides, simultaneously. **For More Information Circle No. 167.**

WHITE CORRECTION FLUID

Litho-Art Products, Inc., 3401 N. Janssen Ave., Chicago 13, Ill., offers Snopake, an opaque white resinous fluid for painting over errors in copy for offset and copying machines. Snopake dries in seconds and hides original copy under a flexible coating that will not flake or peel off. Correction is then typed or drawn on the new white surface. The fluid is also used to make corrections in typed correspondence, reports, forms, etc. It saves time by eliminating the need to opaque film negatives which is generally

necessary when corrections in original copy are patched in. Nominally priced introductory kit contains 1-oz. bottle of Snopake with applicator. Bulk sizes also available. **For More Information Circle No. 171.**

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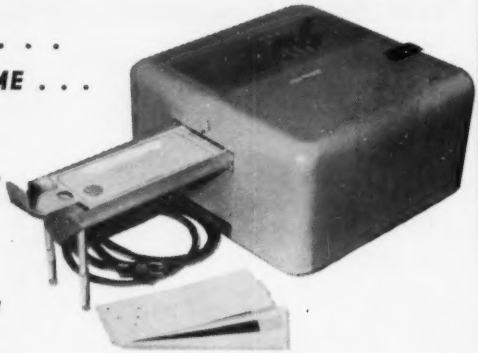
ANYWHERE . . . ANY TIME . . .

Can Prepare Punched Card Records As Data Originates!

Cards and carbon interleaved sets of up to six parts are

PUNCHED AND PRINTED IN ONE OPERATION

Can be read by both humans and machines!



The PUNCHWRITER is operated by any personnel, along with their regular duties, to produce punched and printed payroll checks, bank money orders, time cards, branch office checks, inventory control records, etc. Records can be read by everybody concerned and later processed on tabulating machines. Write for literature describing the portable, low-cost Punchwriter which will extend the advantages of punched cards for you, immeasurably.

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MACKINAC job-ready papers are made for those who take pride in results . . . for those who are seeking clearer, sharper, cleaner impressions every time.

Each paper in the MACKINAC line is specifically made to do a better job. Each paper has an especially prepared surface to insure clearness and sharpness in the process for which it is made and to bring new efficiency to your work.

Only the best wood pulp—*100% bleached chemical wood pulp*—is used in the manufacture of all MACKINAC BUSINESS PAPERS. Precision cut at the mill to sizes 8½x11" and 8½x14", these quality papers are mill-conditioned and packaged in moisture proof wrappers. Each of the papers is available in brilliant white and six bright colors.

Sold by authorized distributors.

The complete Mackinac line consists of:

MACKINAC BOND
MACKINAC DUPLICATOR
MACKINAC MANIFOLD
MACKINAC MIMEO
MACKINAC OFFSET
MACKINAC OPAQUE

FLETCHER PAPER COMPANY

20 NORTH WACKER • CHICAGO 6, ILLINOIS
Mill at ALPENA, MICHIGAN

For More Information Circle No. 328

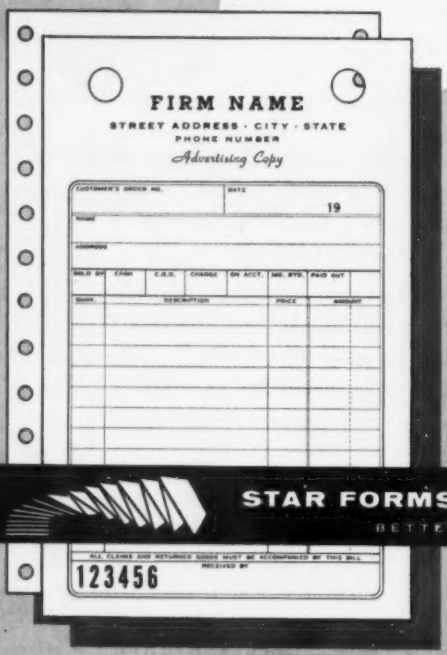
STAR FORMS ARE

DEALER DESIGNED

ALL NEW! Star Forms are the result of "Dealer Designing." Dealers have recommended specific improvements to us . . . to make register forms more salable. We have incorporated these outstanding features into the ALL NEW Star Forms, and have developed register forms which will increase dealer profits because they are truly "Dealer Designed!"

Swift Dependable Delivery!

(10 to 14 day shipment)



MODERN DESIGN
(More writing space, better looking, easier to read)

ALL TYPES OF PUNCHING
(Including line hole punched forms)

TWO COLOR HEADINGS
(Blue and red or black and red)

2500 FORM MINIMUM ORDER
(On all standard body register forms)

CUSTOM FORMS
(Made to your specifications . . . economically)

QUALITY FORMS . . . AT THE RIGHT PRICE
(Quality papers, materials and workmanship by experienced forms craftsmen)

STAR FORMS INCORPORATED
BETTENDORF · IOWA

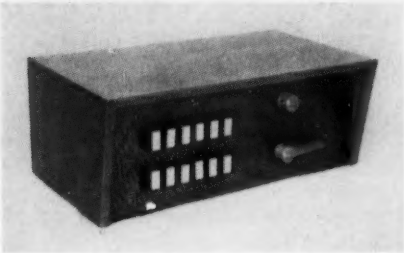
WIDEST RANGE OF STANDARD BODY REGISTER FORMS!
(Over 60 forms to choose from)

WRITE TODAY FOR OUR NEW 60 PAGE CATALOG!

For More Information Circle No. 239

INTERCOM

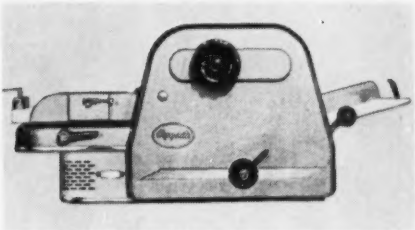
Lake Mfg. Co., 2323 Chestnut St., Oakland 7, Calif., makes Voycall intercom systems with masters for push-button selection of 6, 12, 18 or 24 stations. High quality components and transformer type



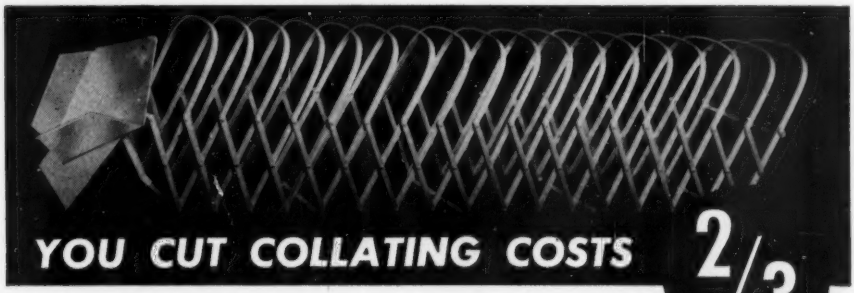
power supplies in master stations provide maximum reliability and freedom from electrical interference. Cabinets are attractively styled and finished in gray or natural walnut. Each trouble-free plunger type annunciator, over the selector buttons, operates in conjunction with an audible signal and remains in indicating position until reset. This identifies calls received during a person's absence. The complete Voycall line of equipment includes rotary selector and flush mounting masters, a variety of substations styles, and master and substation accessories to meet special requirements. **For More Information Circle No. 158.**

SPIRIT DUPLICATOR

Wolber Duplicator & Supply Co., 1201 Cortland St., Chicago 14, Ill., makes a



rugged all-electric spirit duplicator, the Copy-rite Golden Streak, which has many modern features to guarantee fast, effi-



YOU CUT COLLATING COSTS 2/3

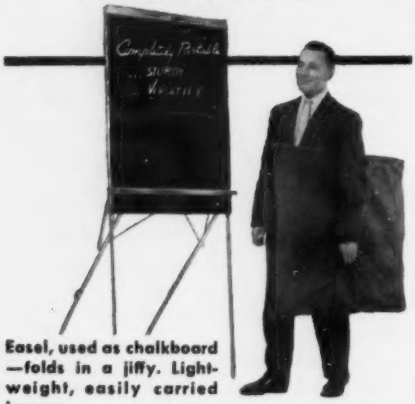
With Evans' Gathering Rack on 10-Day FREE trial! Eighteen sturdy, lightweight aluminum sections hold 500 sheets each. Slashes collating costs — makes even newest help more efficient. Folds compactly for easy storage. Available with new Receiving Tray to stack papers in neat groups. Rack — $25.00. Receiving Tray — $5.00. Send no money for FREE postpaid 10-day trial. See your dealer or write:

Evans Specialty Company, Inc.
P. O. Box 8128, Richmond, Virginia

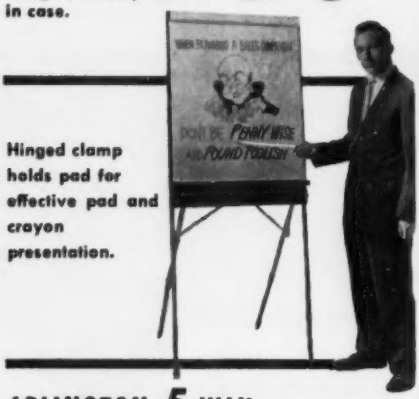
For More Information Circle No. 437

TELL YOUR STORY 5 WAYS...

- Paper Pad Presentations
- Blackboard Chalktalks
- Flip Chart Presentations
- Card Chart Speeches
- Flannelboard Demonstrations



Easel, used as chalkboard —folds in a jiffy. Lightweight, easily carried in case.



Hinged clamp holds pad for effective pad and crayon presentation.

ARLINGTON 5-WAY PRESENTATION EASEL $42.50

Send for literature

Complete with hinged clamp chalkboard, chalk, eraser.

Four paper pads	$12.00
Flannelboard accessory	7.00
Carrying case	12.50

ARLINGTON ALUMINUM COMPANY

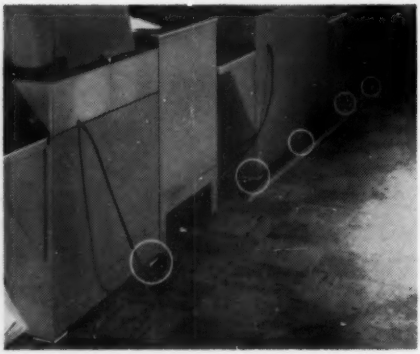
19007 W. Davison • Detroit 23, Michigan

For More Information Circle No. 443

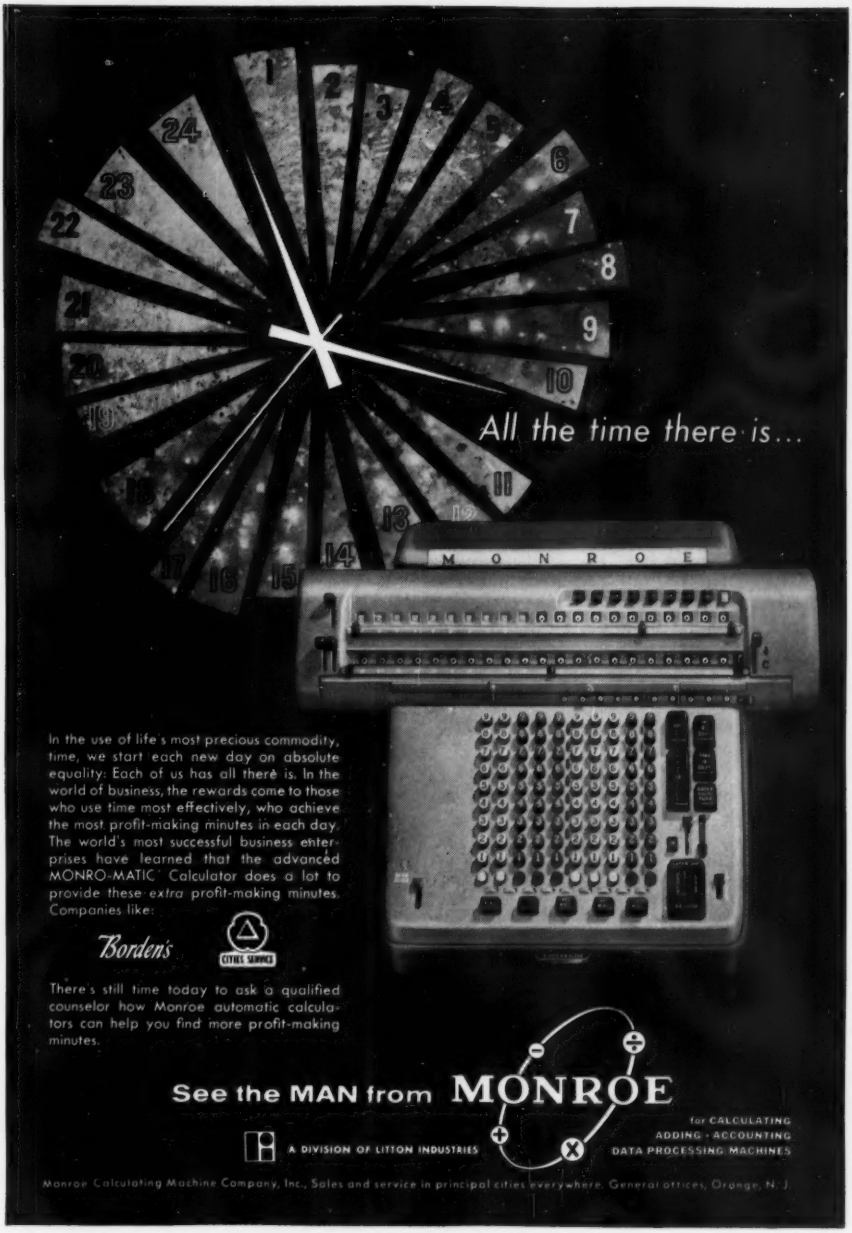
cient operation. Machine automatically shuts off after last sheet is duplicated. Tell-tale signal glows while current is flowing. Lifting pressure control lever stops fluid flow and releases roller pressure in a single operation. Finished in surf green, the unit harmonizes with most office and school decors. Price is $299.50 plus excise tax. **For More Information Circle No. 215.**

MACHINE MOUNTING PADS

Felters Co., 210 South St., Boston 11, Mass., makes Type H Unisorb Vibration Control Pads that reduce transmitted vibration and noise level, and prevent machine stands from creeping. Type H Unisorb is a specially engineered machinery mounting pad for use under medium duty office machines and plant equipment, including key punches, computers, card sorters and bookkeeping machines. In conjunction with the pads, it is possible to use Unisorb



cement where sliding or creeping is a problem; or the pad may be used in a free mounting which effectively absorbs vibration and protects tile floors and expensive carpeting from denting and matting because of machine weight. This has become more important as offices utilize extensive installations of electric machinery which tend to increase noise levels and induce transmitted vibration because of lightweight floor construction. For booklet on how to mount machines, **Circle No. 110.**



For More Information Circle No. 243

This tape mends with a big surprise.
It disappears before your eyes!

REG. U.S. PAT. OFF.

SCOTCH BRAND

No. 810 Magic Mending Tape

for permanent paper mending

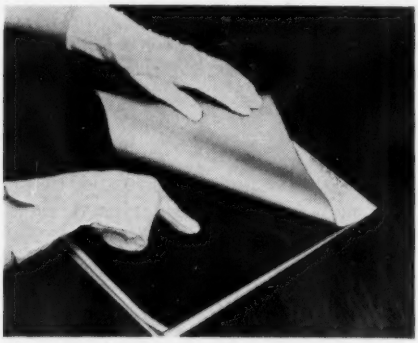
Practically disappears on contact with paper, will never crack, cloud or ooze adhesive. And you can write on it! For all permanent mending and sealing.

"SCOTCH" BRAND Tapes are a girl's best friend!

"SCOTCH" is a registered trademark for the pressure-sensitive adhesive tapes of 3M Co., St. Paul 6, Minn. Export: 99 Park Ave. New York 16. Canada: London, Ontario.

SPIRIT CARBON

Carter's Ink Co., Dept. HP, Cambridge 42, Mass., makes Ultra White Glove spirit vapor carbon in brilliant blue, purple and black. Each master unit yields up to



200 easy-to-read copies. According to Carter's, a special manufacturing process locks in the coating and keeps Ultra White Glove remarkably clean even when hands are moist. This prevents stains on hands, paper, clothing and everything the typist touches. With this source of distress eliminated, work speeds up and morale improves. Besides its cleanliness, the carbon produces the number of copies most often needed, and affords the convenience of using a single unit that combines both fine master paper and fine duplicator carbon. For free Ultra White Glove samples, **Circle No. 197.**

MACHINE PADS

Hutton Business Service, Box 66, Highland, Calif. makes the Add-O-mount Grip or Slide Pad. Combining polyurethane and

felt for deadening sound, pad is 3/8" thick. Polyurethane is cut so that thousands of feet grip the desk surface and pad will not slide or budge under a machine. How-

New, Improved, Money-Saving **ACCOUNTING BOARDS**

POSTING TRAYS

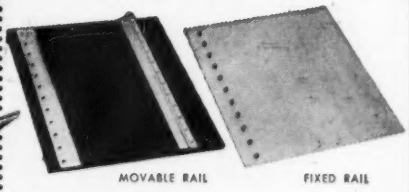
IT'S A POSTING TRAY...

IT'S A REFERENCE BINDER!

Speed paper handling with this sturdy, compression type NARCO Posting Tray. Opens, locks, extends with finger tip control for posting, reference, storage.

- *Beautifully finished in metallic gray*
- *Wide selection of standard sizes*
- *Special sizes made to order*

WRITE FOR INFORMATION AND PRICES



MOVABLE RAIL FIXED RAIL

CREATE MULTIPLE RECORDS WITH *ONE* WRITING!

Get machine efficiency — without the machine! Patented features on easy-to-use NARCO movable Accounting Boards assure positive registration.

- *Adjusts horizontally and vertically*
- *Collating rails can not fall out*
- *Wide selection — movable or fixed rail*
- *Special sizes made to order*

WRITE FOR INFORMATION AND PRICES

NARDON MANUFACTURING COMPANY
2125 W. MISSION ROAD
ALHAMBRA, CALIFORNIA

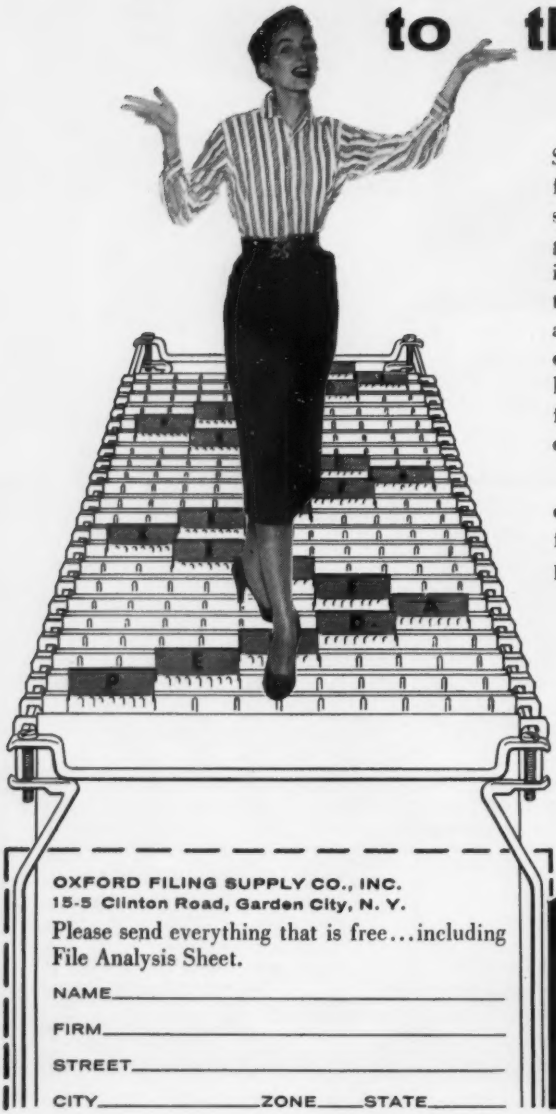
Narco

DISTRIBUTORS:
Some territories still open.

For More Information Circle No. 442

←For More Information Circle No. 229

How PENDAFLEX® gives more miles to the gal



Simple. Hanging, sliding folders mean less work, more speed for every file gal. Finger-tip control of all folders increases a gal's file power, too . . . makes *any* file clerk a top octane performer. And exclusive Pendaflex "Keyboard" selection is geared for peak efficiency, new office economy.

Full details optional at no extra cost when you send for free File Analysis. Mail coupon today.

Oxford Filing Supply Co., Inc.
Garden City, New York

OXFORD FILING SUPPLY CO., INC.
15-5 Clinton Road, Garden City, N. Y.

Please send everything that is free...including File Analysis Sheet.

NAME_____

FIRM_____

STREET_____

CITY_____ZONE____STATE_____

Oxford

FIRST NAME IN FILING

For More Information Circle No. 308

ever, with felt side down, user can slide machine as desired. Pads are made in standard sizes from 9" x 11" to 12" x 15" for all machines; and 11" x 13" and 14" x 14" for typewriters. **For More Information Circle No. 190.**

ADDING MACHINE

R. C. Allen Business Machines, Inc., 668 Front Ave., N. W. Grand Rapids, Mich., makes the No. 4189 portable 10-key adding machine which has a 999,999.99 listing capacity, a totalling capacity of 9,999,999.99, and offers such features as direct subtraction printed in red; credit totals and sub-totals printed in red; automatic step-over for extremely fast multiplication, and built-in wheels for easy desktop movement. Other features include a motorized non-add key, motorized correction key, single and double spacing control, and single backspace key. In addition, the 4189 has a transparent plastic tear-off

blade, easy ribbon and tape change; and roomy, write-in table. For extra quiet operation, the 4189's sturdy aluminum case is mounted on a synthetic rubber base. **For More Information Circle No. 101.**

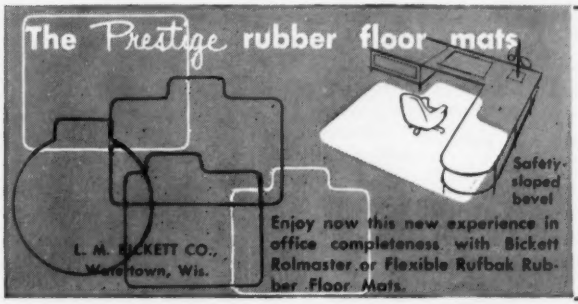
MILLER-TROJAN photo equipment
for top performance — at lowest cost

VACUUM FRAME–ARC LIGHT COMBINATION MAKES PERFECT OFFSET PLATES IN 2 MIN.

Gives you line and halftone plates at lower cost. Arc lamp furnishes intense single source light. Vacuum frame assures perfect overall contact—has 1/4 H.P. motor, vacuum pump, and hose. Sizes 12 x 17, 16 x 21, 22 x 25 and larger. **12 x 17 frame-lamp combination ONLY $199.45.**

MILLER-TROJAN COMPANY, INC., Troy, Ohio

For More Information Circle No. 422



L. M. BICKETT CO.
Dept. O-559,
WATERTOWN, WIS.

Send coupon for FREE beautiful colored literature in reply form
INQUIRIES INVITED

Name .....
Address .....
City .....
State .....

For More Information Circle No. 423

NOW...the only stand on the market today that combines...

an elevating device

and a full-size drawer

LUXCO
MODEL B410

and it sells for a low, low $19.95

These 3 tremendous features . . . found only in the LUXCO MODEL B410 . . . make this stand perfect for large and small offices.

Office engineered for "NO NOISE"

Exclusive **SILENT STEEL**

Also features *soft rubber casters . . . steel ring support under top . . . baked enamel finish . . . piano hinges . . . all steel construction* . . . and others.

DIMENSIONS
Top Size . . . . 14½ x 18"
Leaf Size . . . 14½ x 8½"
Overall Size . 14½ x 35"
Height . . . . . 27"
Shipping Weight . . 33 lbs.

COLORS:
Gray . . . Desert Sage
Mist Green

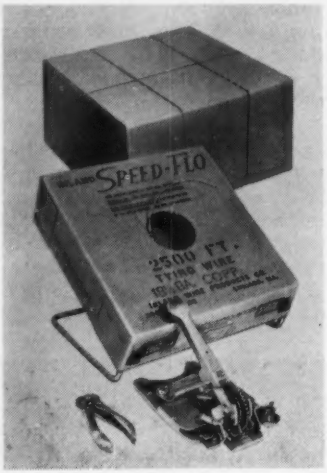
Ask for Literature

BADGER *inc.* LA CROSSE WIS

For More Information Circle No. 413

CARTON STRAPPING KIT

Inland Wire Products Co., 3947 S. Lowe Ave., Chicago 9, Ill., introduces the Mighty Might Round Steel Strapping kit, designed to reinforce, seal or bundle small shipping cartons for offices and shipping rooms where heavier strapping equipment would be impractical. The kit consists of a lightweight, compact, single



stroke steel strapping unit; 2500 ft. of 18½-gauge copper coated steel strapping in an easel fibre carton, and an auxiliary cutter. Compact unit tensions and ties the strapping with a single stroke of the lever, entire operation taking only seconds to complete. Kit offers complete strapping facilities and supplies at economical cost and is available on mail order. **For More Information Circle No. 193.**

PAPER TAPE FILE

Dresser Products, Inc., Box 2035, Providence 5, R.I., has developed the desk-top rotary Tape File No. 5897. It consists of a series of ball bearing mounted rotating trays holding oilproof envelopes for vendor, name and address, or other frequently used master tapes. Tabs are available for indexing in various manners, allowing for

HERE, AT LAST, IS A FOUNTAIN PEN WRITING FLUID WHICH REPRODUCES ON ALL COPY-MAKING MACHINES USING A HEAT, CHEMICAL OR PHOTOGRAPHIC PROCESS

NEW PERMANENT JET BLACK

Skrip® WRITING FLUID

In the famous Top-Well bottle for Sheaffer's *Snorkel* fountain pens

In unbreakable drop-in cartridges for Sheaffer's *Skripsert* fountain pens

This new writing fluid was developed *specifically* for use in offices equipped with copy-making machines!

A message written with Sheaffer's new Permanent Jet Black *Skrip* will reproduce so black and bold that it's as legible as the original. And, in writing, it won't feather or fade... starts instantly, dries quickly.

Turn to new Permanent Jet Black *Skrip* today, and you'll turn out clean-cut copies of handwriting hereafter!

SHEAFFER'S®

© 1959, W. A. S. P. CO.

FREE!

A cartridge of Permanent Jet Black Skrip, plus a review of Sheaffer fountain pens and desk sets ideal for use in offices!

W. A. Sheaffer Pen Co.
Dept. RS-3, Fort Madison, Iowa
Please forward a FREE cartridge of Permanent Jet Black *Skrip* writing fluid to:

Name_____

Firm_____

Address_____

City_____ Zone____ State_____

For More Information Circle No. 304

ATLAS
VERTICAL FILING
SYSTEMS

- FAST
- EFFICIENT
- ECONOMICAL
- SAFE

FOR
NEGATIVES • OFFSET PLATES
STENCILS • SKETCHES • ARTWORK
MASTERS • X-RAYS

ATLAS CABINETS

Complete line of models for negatives, plates, stencils, etc. up to 21" wide. Capacities up to 1,400 pieces. Wide range of sizes up to 20½" wide, 52" high, 28" deep.

ATLAS HANGERS

Over 20 types and sizes, a complete patented line. Lug, spring-clip and envelope types to fit every need.

At Quality Equipment Dealers Everywhere—Specialized Model at Addressograph-Multigraph Agencies

Write for Complete Catalog

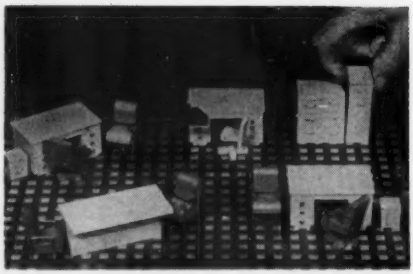
ATLAS STENCIL FILES CORP.
16716 Westfield Ave. • Cleveland 10, Ohio

For More Information Circle No. 444

the convenient storage and ready accessibility of from 1000 to 6000 tapes. Positioned on a desk top to the right or left of the operator, any tape can be quickly

located, pulled and refiled by simply rotatating the tray to the desired tape. **For More Information Circle No. 182.**

You Can Find New Office Space With 3 D Planomatic



Planomatic—Magnetized 3 D scale models—reveals the most efficient space plan by permitting complete visualization.

Planomatic sets are available in any size to meet your requirements.

M & M INDUSTRIES
P. O. Box 91 South Milwaukee, Wis.

For More Information Circle No. 445

WALL ASH TRAYS

McDonald Products Corp., 238 Dukit Bldg., Buffalo 10, N. Y., makes Jumbo Wall Urns which can be mounted waist high to make it more convenient for smokers to put ashes in the receptacle. Photo below demonstrates the strength of the Jumbo model that is bolted in place. The company also makes a model that is cemented on marble walls. Several different shapes of wall urns in all types of metal and wood finishes are now available. **For More Information Circle No. 187.**

SPIRIT MASTER NUMBERER

Bates Mfg. Co., 63 Vesey St., New York 7, N. Y., has designed the CD (spirit) type face especially for use on spirit duplicating masters. The new type is sharper for hectograph master work and Bates recommends a Bates Numbering Machine with CD (spirit) type, mounted on a platform equipped with a cellulose acetate striking pad. The CD (spirit) type adds $12.50 to the list price of a Bates CD type machine. **For More Information Circle No. 185.**

CORRECTION

In the advertisement of Collamatic Corp. on page 163 of the April issue of THE OFFICE there was a typographical error. The portable electric Collamatic Desk Top Collator actually collates all types of 8½"x11" paper.

Holders clipped to tote boxes on conveyor belt | Tabulating card holders in shelves on storage walls | Card holders stacked 2-high on shelves in hospital supply room

TABULATING CARD HOLDERS

ADAPTABLE TO FIT ANY SYSTEM

Users report fewer mistakes, better control and speedier handling of all types of merchandise.
Easily installed on any type shelves, bins, boxes, containers.

- inventory control
- purchasing records
- inventory location
- billing card storage
- hundreds more uses

Model B-100 Keyhole type card holder | Model B-120 Tote box card holder with clips

COLORS: Ivory, red, green, blue, yellow or black.

METAL CLIP, to fit all types of shelving, available.

BEEMAK TABULATING CARD HOLDER

BEEMAK PLASTICS

7424 Santa Monica Blvd., Los Angeles 46, Calif.

FREE SAMPLES sent upon request on your letterhead.

For More Information Circle No. 431

DISCOVER INCREASED
OFFICE EFFICIENCY
with the NEW

R.C.Allen
VisOmatic

With its new and exclusive automatic bail for instant paper insertion . . . and new, transparent built-in card holder that permits typing anywhere on any card . . . you'll find that the new VisOmatic simplifies typing and delivers a bonus of increased office efficiency.

Look at these added efficiency features:
fully automatic margins • fingertip tab set and clear buttons • quick-switch platen • half-space error correction and margin justification.

Discover the new VisOmatic today . . .
Call your R. C. Allen dealer for a demonstration.

R.C.Allen
Business Machines, Inc. 668 Front Ave. N.W. Grand Rapids, Michigan

Adding Machines • Bookkeeping Machines • Cash Registers
Typewriters • Safes and Files • Carbon Paper and Ribbons • Precision Aircraft Instruments

YELLOW PAGES

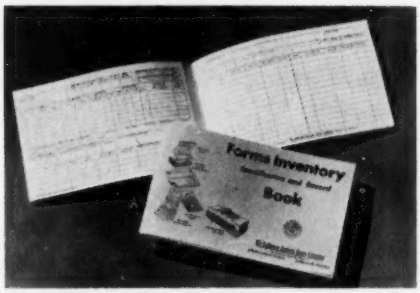
99

For More Information Circle No. 233

Literature from the Manufacturers

FORMS INVENTORY RECORDS

Baltimore Business Forms Co., 3144 Frederick Ave., Baltimore 29, Md., offers an inventory, specification and record book to users of forms who are interested in better control over supplies. Inventory pages show, at a glance, monthly usage and balance on hand, making it easier to



determine the proper time and quantity to reorder. Each inventory page is backed up with a specification page designed to show all essential facts for accurate reordering. Here may be kept a record of sizes, number of copies, papers, leaf-to-leaf copy changes, inks, numbering, perforations, carbons, binding or packaging. For a copy of the Forms Inventory Book, **Circle No. 220.**

DICTATING ON TAPE

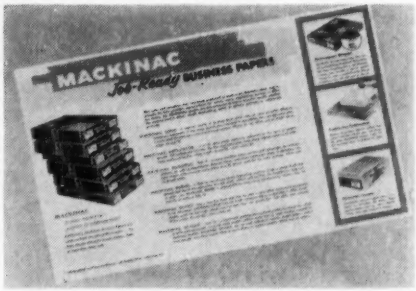
DeJur-Amsco Corp., Business Equipment Div., 4501 Northern Blvd., Long Island City 1, N. Y., has prepared a 12-page full-color booklet on the advantages of using magnetic recording tape as a dictating medium. "How to Measure Time With Tape" describes the superiorities of magnetic tape dictation, the economy of tape, erasability, fidelity and the electronic correction of errors directly on the medium. For the booklet, **Circle No. 133.**

CHART OF RECIPROCALS

Addo-x, Inc., 300 Park Ave., New York 22, N. Y., offers a practical, easy-to-use chart listing reciprocals of all whole three-digit numbers from 101 to 999 giving nine decimals. The chart is intended as a convenient help when using Addo-x automatic multipliers for division. For free chart, **Circle No. 134.**

DUPLICATING PAPERS

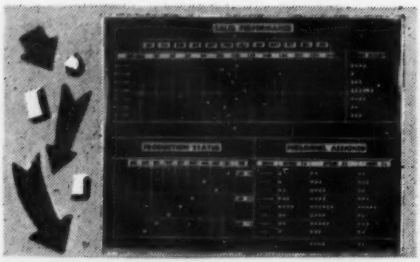
Fletcher Paper Co., 20 N. Wacker Drive, Chicago 6, Ill., offers an 8-page two-color folder on Mackinac Job-Ready Papers. It is written specifically to assist users of Mackinac papers in the selection of the



proper paper for the job, to obtain the best results. Six grades are briefly described and their recommended uses indicated, whether for various office duplicating processes, offset or letterpress printing. All Mackinac Papers are precision cut at the mill to sizes 8½" x 11" and 8½" x 14". For the folder, **Circle No. 148.**

VACATION SCHEDULE

Manpower, Inc., 876 N. Plankinton Ave., Milwaukee, Wis., offers a Vacation Schedule to help forecast vacation periods



magnetic

VISUAL CONTROL BOARDS

Make Card and Peg Systems Obsolete

Time and motion studies prove that the "Maggie" board with its colored magnetic indicators that move with finger-tip ease offers the easiest and quickest way to chart sales, production, inventories, traffic and any other phase of your business. At a glance you know what is happening. The first cost is the last cost because there are no cards or pegs to replace. Packaged kits begin at $49.50.

For information on the most modern and advanced board available today, write to:

MAVCO maggie magnetic visual aids corp.
19 West 32nd Street New York 1 N. Y.

For More Information Circle No. 440

WE KEEP A *DRY*STIK AT EVERY DESK. IT'S SO FAST & CLEAN FOR ALL PAPER PASTING

DRY-stik
RUBBER CEMENT PASTE
in **DRY BAR** *form*

- Posts bulletins
- Holds letters in folder
- Eliminates paper clips, staples, thumbtacks

Always ready for clean, instant use. Outsticks a quart of rubber cement. Can't stain, curl, spoil, dry out. Holds permanently, yet is peelable.

Satisfaction Guaranteed

TRIAL OFFER 2 bars $1 postpaid or $5.28 per doz.

DRYstik Company Dept. 215
4356 N. Kedvale Ave. Chicago 41, Ill.

I enclose $..... Rush postpaid.....bars
DRY-stik at 2 for $1.00, 12 for $5.28

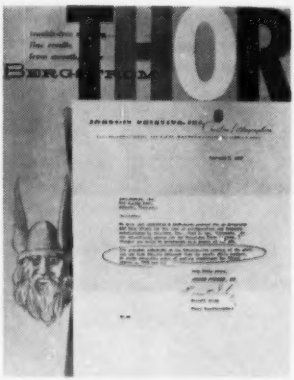
Name .....
Company .....
Address .....
City .....Zone....State.....

For More Information Circle No. 441

and prepare for resulting work overloads. The calendar, covering the period from March 1959, through January 1960, is arranged so that executives can chart periods and departments in which extra help will be needed and plan in advance to meet these needs through the temporary help service. Manpower employees do work for offices, factories, stores and warehouses during vacations, overloads and peak seasons. The work is done on an hourly or piece-work basis, on the customer's premises or in Manpower offices. Businessmen can cut operation costs by holding their staffs at the minimum necessary for day-to-day operations and utilizing temporary help for work above that level. For the calendar-schedule, **Circle No. 132.**

OFFSET PAPER

Bergstrom Paper Co., Neenah, Wis., offers a brochure on Thor Offset paper, made from mellow book stock blended with virgin pulp and processed on modern papermaking machines and surface sizing equipment. Finished in rolls and sheets



under scientifically controlled humidity and temperature, Thor Offset offers high resistance to picking and fast, trouble-free drying for no-glare full-color printing. It is available in cut sizes 8½" x 11" and 8½" x 14" for convenience in office offset duplicating. For the brochure, **Circle No. 218.**

WHEN SHOULD YOU BUY A MACHINE LIKE THIS?

Photostat® Photographic Copying Apparatus, Junior Continuous A, one of 3 models ideally suited for volume "in-office" photocopying.

Believe it or not, you will find it profitable to install such a unit when your estimated volume comes within 60% of justification. (Photostat Photographic Copying Apparatus works so dependably that you can figure accurately what each photocopy is going to cost.)

This is why it's profitable to be forehanded. As soon as your staff members realize that, by pressing a button, they can get quality copies every time at known costs, your volume of photocopy work rises sharply. What seemed to be a doubtful accessory soon proves to be an economic necessity.

Photostat Corporation *specializes* in copy methods for modern business. A Photostat Corporation representative — handling photocopy, microfilm, and offset equipment — can help choose the system right for you.

PHOTOSTAT CORPORATION
P.O. BOX 1970 TO • ROCHESTER 3, N.Y.
PHOTOSTAT IS THE TRADE MARK OF PHOTOSTAT CORPORATION

Your key to complete copy satisfaction
PHOTOSTAT
PHOTOCOPYING OFFSET AND MICROFILM EQUIPMENT

For More Information Circle No. 307

Brand new!
PAPER TRIMMER & CUTTER *combined*
CUTS UP TO 50 SHEETS IN ONE STROKE

4 MODELS:
14", 22", 28"
and 28" (foot model)

KUTRIMMER

ALSO CUTS cardboard, fibreboard, foils, rubber, fabrics, leather, linoleum, felt, thin plywood, thin soft metal and many similar materials.

FOR EVERY BUSINESS:
offices, plant, shipping, schools, banks, photography, and homes.

See **KUTRIMMER** at your local dealer or write to

MICHAEL LITH sales corp.
147 West 45th Street, New York 36, N.Y.
For More Information Circle No. 435

THE PRINT-O-MATIC CO., INC.
724 W. WASHINGTON BLVD. • CHICAGO 6, ILL.

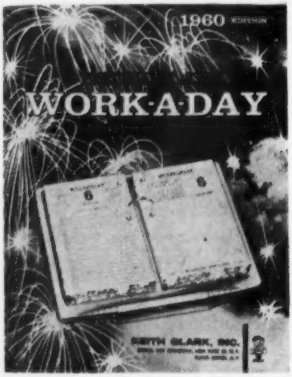
For More Information Circle No. 436

NUMERAL FREQUENCY CHART

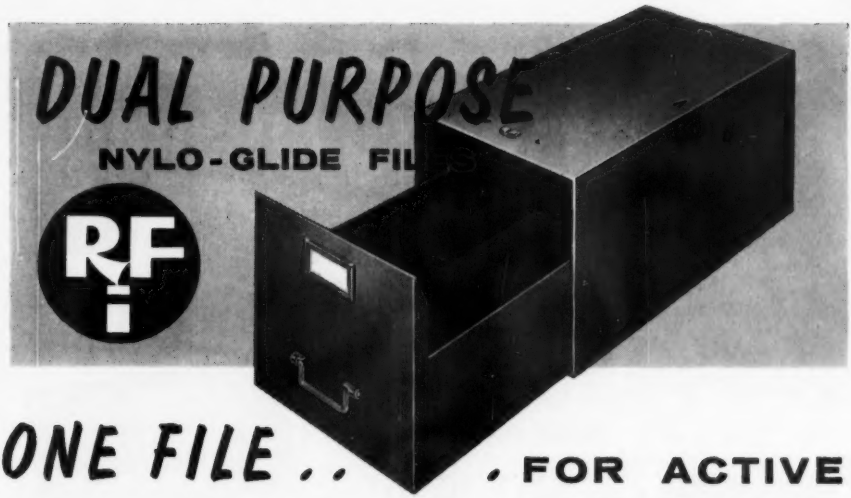
W. H. Brady Co., 754 W. Glendale Ave., Milwaukee 9, Wis., offers a chart showing the frequency of digits zero through nine, when individual numbers are used for consecutive marking from one through 1999. Painters, maintenance men and those who stencil or are assigned projects requiring bin, aisle, part, machine, department, post or package marking can use the chart to determine the quantity of each numeral required to make up consecutive number patterns. Chart also indicates the correct quantity of Brady self-sticking numbers to be used in consecutive marking. For free chart, **Circle No. 139.**

CALENDARS

Keith Clark, Inc., 1451 Broadway, New York 36, N. Y., offers its 1960 catalog describing calendars now ready for the 1960 market. Catalog includes colorful illustrations of the Work-A-Day desk calendar in book and pad styles, and the functional Schedule-A-Date calendar for



business and professional men to whom advance dates are important. Catalog also includes executive and gift style calendars with genuine gold-tooled covers; the Today Wall Calendar with a page for every day; the Work-A-Day Weekly Reminder Wall Calendar for swift, accurate weekly scheduling; the Daily Desk Diary for every appointment record. All K-Cey desk calendars feature scuff-proof bases and are



ONE FILE . . . FOR ACTIVE AND INACTIVE RECORDS

The attractive NYLO-GLIDE file may be used as an active reference file, then when records become inactive, drawer may be removed and exchanged with an empty drawer in the inactive file room.

RFI NYLO-GLIDE Files are so reasonably priced that they may be used economically for the storing of inactive records . . . AND — they are so attractive and operate so easily that they can be used as an active reference file.

You can't see all of the quality that is built into NYLO-GLIDE Steel Record Files, but year after year of faultless service will prove to you that no finer file was ever built.

(New, modern design with smooth nylon bearings that actually outwear steel, and provide featherlight operation even under heaviest loads.) You save time, money and energy when you equip your office with NYLO-GLIDE Steel Record Files.

As attractive as they are functional. Designed and fabricated by craftsmen, and finished with care of the finest materials; NYLO-GLIDE Files present an appearance that blends harmoniously with the decor of any office. You'll have to see these files to fully appreciate their quality and utility.

RECORD FILES INC. WOOSTER, OHIO

For More Information Circle No. 329

no more messy labeling!

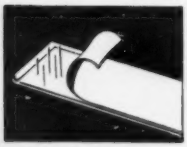
USE DPI Premier STIK-ON LABEL HOLDERS

"will not warp, curl or crack"

CLEAR VINYLITE PLASTIC

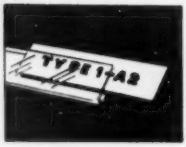
SO EASY TO USE

1. SNIP—You can cut to the desired size, easily and quickly.



2. STRIP—Remove backing to expose the activated adhesive.

3. STICK—Apply with finger pressure. It sticks indefinitely to metal—wood—cork—glass—plastic—any clean surface.



4. INSERT—Insert label or card. It's open on three sides for your convenience.

Perforated inserts for easy typing furnished.

Colors Available

AMBER
BLUE
GREEN
YELLOW
RED

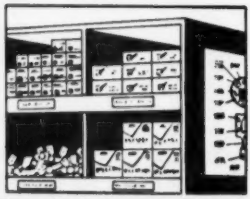
HUNDREDS OF USES

You can enjoy neat, attractive labels anywhere in office, factory, store or home.

- on desk trays
- library shelves
- cabinet drawers
- storage shelves
- display units
- parts bins

AVAILABLE IN 3 SIZES

PS-½—½"x6"
PS-¾—¾"x6"
PS-1 — 1"x6"



For auto dealer parts bins, etc.

Available from your Office Supply Dealer or for information write to

Office Products Inc. 26029 W. 8 Mile Rd. Detroit 40, Michigan

West Coast Distributor: Arch K. Ansty, 171 2nd St., San Francisco 5 • Canadian Distributor: The Luckett Loose Leaf, Limited, Toronto 14, Ontario

Territories available for Dealers and Distributors

For More Information Circle No. 248

functionally designed for writing comfort and visibility. Bases come in decorator colors to blend with every decor: walnut brown, office gray, pastel mist green and desert tan. Catalog illustrates the many styles and sizes of calendar pages available, with uncluttered format and clear printing. Large numerals mark the current date and holidays are in red for easy recognition. K-Cey pad features include a spotlight date which indicates the current date at a glance; number of days past and days ahead in the year are printed on every page; and a three-months calendar panel is at the top of each page. Magnifying headband on pad style calendar gives clear yearly calendar. Packaging of all K-Cey pads is in durable Mylar which prevents fingermarks. Pad pages remain fresh and clean until they are used. To obtain the catalog, **Circle No. 130.**

DATA SYSTEM

Royal McBee Corp., Data Processing Div., Port Chester, N. Y., has issued a 10-page booklet (S-500) on its Automatic Keysort System, described as a new concept in practical office automation and explained in non-technical terms. Illustrates how an original unit record can be coded for automatic processing with flexible low-cost machines. System is adaptable to centralized or decentralized procedures in companies of all sizes. For the booklet, **Circle No. 223.**

PUBLICATION BINDING

Macey Co., 13835 Enterprise Ave., Cleveland 35, Ohio, offers an eight-page booklet, "I've Got A Sporting Proposition For You," which asks you to estimate your present production costs for binding

JOHNSON
SUPER-BONDED
PLASTIC TOPS

table tops • counter & laboratory tops
furniture tops • wall paneling • doors
fabricated to your specification

Specify custom fabricated Johnson tops wherever mar-proof, protected surfaces are desired. Superbonding is an exclusive lamination process for precision smoothness . . . longer life . . . complete sanitation. Available in Formica and other plastic materials . . . tremendous range of styles, designs.

Architects . . . Designers . . . Decorators
See Sweet's File 14a/Jo, or send for catalog

JOHNSON PLASTIC TOPS, INC.

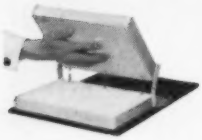
sold nationally through representatives in all major cities
Elgin 11, Illinois • Sherwood 1-0134

For More Information Circle No. 453

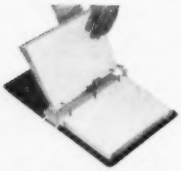
NEW!

the posts swing open for easy insertion of sheets

- Ends the "headache" of dismantling binders.
- Permits instant insertion or removal of sheets.
- Sections can't come apart — prevents dropping or spilling sheets.



SWINGS OPEN
Sheets swing open instantly at any point. No fumbling — no spilling.



SWINGS CLOSED
Swing the sheets closed and the posts telescope together automatically.

Ideal for salesmen, jobbers and distributors, parts departments, office reference manuals and catalogs, vital statistics files, loose leaf directories, and wherever giant capacity ring binders are needed.

Ask your office supply dealer for the FAULTLESS Slide-Hinge Binder.
Sold by FAULTLESS dealers everywhere.

FAULTLESS

STATIONERS LOOSE LEAF COMPANY

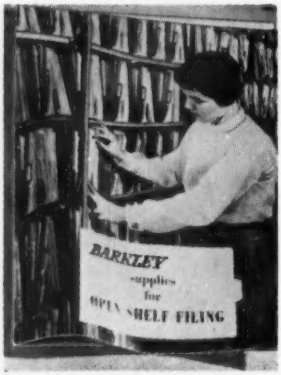
246 E. Chicago Street, Milwaukee 1, Wis.
114-116 East 13th St., New York 3, N.Y.

For More Information Circle No. 459

a specific publication which is outlined in the booklet. Then match your costs to those actually incurred in producing the same publication with their Stitch-A-Fold saddle stitching. Along with the booklet is a complete information kit describing installations and the variety of applications where Stitch-A-Fold is used, plus other informative literature. For this literature, **Circle No. 196.**

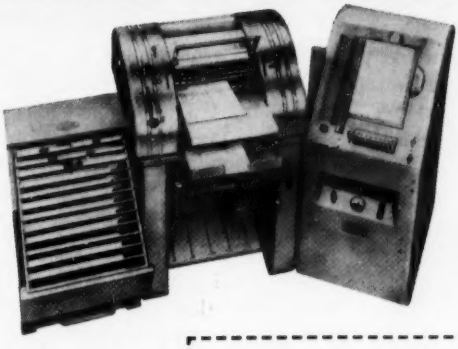
OPEN SHELF FILING

C. L. Barkley & Co., 1220 W. Van Buren St., Chicago 7, Ill., offers a nontechnical folder on the relative advantages of open shelf filing. Barkley distributes supplies for all types of filing and says it is therefore not biased in favor of any one system. It recognizes that in many installations the conventional file cabinet is the most satisfactory, but also that there are many instances in which the open



shelf system is preferable. The Barkley folder emphasizes that economy, both in space and housing, and quicker access to wanted folders, are advantages of the open shelf system. These are offset to some degree by lack of privacy and difficulty in protecting from fire. However, many of the largest companies, with immense filing problems, are turning to the open shelf system which indicates a growing belief that in many cases the advantages outweigh the disadvantages. For this folder, **Circle No. 207.**

ORMIG ELECTRONIC SPIRIT DUPLICATOR



The first and only systems duplicator which will select, electronically, any number of lines from any location on the master* in any combination desired, for reproduction in condensed form on the run-offs.

*New long run, **real black,** extra clean spirit master units. Also, water-insoluble purple and blue.

a "one-writing system" to fully automate your handling of

- **Order Invoicing**
- **Partial Shipments**
- **Production Control**
- **Purchasing**
- **Breakdown of Parts Lists**
- **Sales Analysis**
- **and many more**

WITH the Ormig Electronic only one writing is needed for the creation of the records required... eliminating the continuous rewriting and rechecking of data that runs up overall costs. The Electronic can select such desired information as specific items in billing and back orders—names, addresses plus pertinent items in purchasing—statistics in sales analysis—and any other needed data. The Ormig "one-writing system" eliminates the possibility of errors through rewriting, thus effecting maximum savings while speeding up business routines. Whatever business you are in, you can have an Ormig-automated office. This is the practical way to convert your present procedures to the highest degrees of economy, accuracy, speed and simplicity.

Franchise available in many cities for qualified dealers with systems background.

Copy-Craft

COPY-CRAFT INC., DEPT. OE-59, 105 CHAMBERS ST., N. Y. 7

CARBON PAPER AND RIBBONS · DUPLICATING, PHOTOCOPYING AND SYSTEMS MACHINES AND SUPPLIES

For More Information Circle No. 385

Production Control

(Continued from page 136)

computer room by gang punching from the original. Of these four copies, one is retained in the computer room, one in the central control room (production management), one is issued to the timekeeper and one is a shop copy, issued to the foreman with the week's other papers.

When a batch of a part has been completed, inspected and counted, the results are entered on the shop card which is returned to the central control room where the entry is copied on their operations job card. The shop card then goes to the timekeeper who records the entry on his card and sends this to accounts department for costing and other purposes. The shop card itself is filed by the timekeeper and retained for one month. This does not apply to the shop card for the last operation since this serves to book the part into inventory by quantity.

The marked control room copy is sent to the computer room where the entry is sensed and punched into the card. The computer room now holds both its original copy of all operation job cards issued to the shops and the control room copy of all operation job cards returned from the shops relating to completed jobs. A collation of one against the other and the throwing out of unpaired cards shows which jobs are behind schedule. Inventory, which usually freezes a large proportion of the available capital, has been reduced by 50%, and there is less in production at any particular time.

For More Information Circle No. 454

RCA's 501 Computer

(Continued from page 146)

tremely flexible and highly efficient. For example, it can compute and magnetic tape write, or paper tape punch, or monitor print; magnetic tape read and compute, magnetic tape read and magnetic tape write, etc., through simultaneous operation of paper tape and magnetic tape devices, random access files, and on-line printer along with computer functions.

RCA specialists develop a system tailored to each customer's needs. Applications vary widely. Some customers' programs are progressive, beginning with a major operation and adding more operations later. Other customers develop programs to cover a number of clerical operations, ranging

Everybody wants to sell!

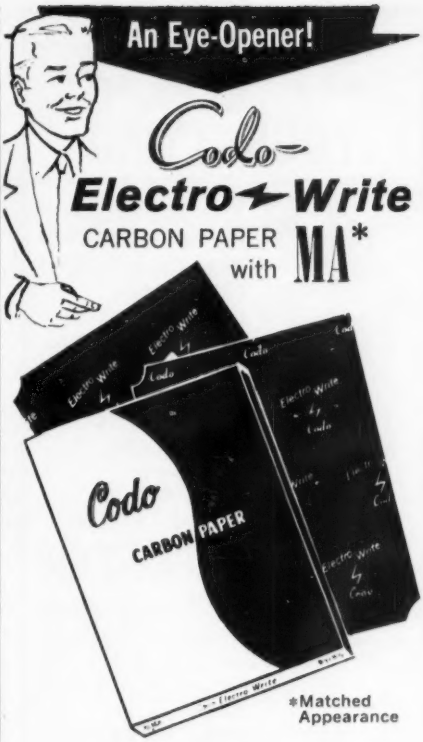
We want to buy!

Importers in Western Germany, big firm, financially strong is interested in FIRST CLASS GENERAL AGENCIES of office-machines, office-equipment and similar lines.

Please send detailed offers to:

Transeuropa

Büromaschinen-Vertrieb G.m.b.H., Hannover (Western Germany), Postfach.



Think carbons from the new electric typewriters can't look as sharp as the originals? YOU HAVEN'T TRIED CODO ELECTRO-WRITE! It matches the sharp, clean impression of the original . . . every time! Wears long, too! *Try it! No obligation.*

Samples on request

Codo MANUFACTURING CORP.—

Dept. 0
Leetsdale, Pa.

Attach this coupon to your Company's letterhead and send for free samples.

NAME.....

ADDRESS.....

For More Information Circle No. 425

SPEED
YOUR TYING

TIE LETTERS, PARCEL POST, CHECKS, BOXES, CIRCULARS, LABELS, PRINTED MATTER AND THOUSANDS OF OTHER ITEMS *10 TIMES FASTER* *with an*

AUTOMATIC PAK-TYER

Easy to operate and maintain. This speedy **ALL-PURPOSE** tying machine is designed to tie any size or shape package tight without adjustments. The knot is slip proof. Saves time and twine. Several models to choose from.

LET FELINS SOLVE YOUR TYING PROBLEMS.
WRITE FOR CIRCULARS NOW.

FELINS TYING MACHINE CO.
3351A No. 35th St.
Milwaukee 16, Wis.

For More Information Circle No. 433

FREE DIES AND PROOFS

GENUINE ENGRAVED LETTERHEADS $15.00 FOR 1000

Genuine ENGRAVED BUSINESS CARDS
500 $11 • 1000 $15

BUSINESS ANNOUNCEMENTS 500 ONLY $28

CUT YOUR LETTERHEAD TO THIS AD... MAIL FOR FREE PROOF.

MANUSCRIPT COVERS $3.00 FOR 100

DEWBERRY ENGRAVING CO.
807 SO. 20th ST., BIRMINGHAM 5, ALABAMA

For More Information Circle No. 434

up to complete integration of data processing. Economy and efficiency of the 501 system may be realized regardless of the scope of a program. A bank, for example, plans to begin its progressive automation by converting manual and electromechanical demand deposit bookkeeping to a 501 system. This operation will also generate reports for management guidance which were never before feasible.

The bank's program has been developed to utilize the system's "bonus" capacity for other subsequent operations: personal loan accounting, savings account bookkeeping, trust accounting, commercial loans accounting, and new banking services which may be offered.

Another 501 user, an electric power company, whose initial basic program will employ punched cards for input, need only add additional punched card input and output units to increase system capacity for increased workload. A wholesaler, using the system, may have the problem of increasing number of dealers—or orders—and a more extensive inventory in terms of number of items, than when he began his program. To maintain his records up-to-date almost as quickly as each transaction occurs, he can add as many units as needed (up to 12) of random access storage files for processing orders, maintaining inventory records, and planning operations on a minute-to-minute basis.

For management, the system means more effective controls through almost instantaneously available reports possible only on a computer.

The services and facilities which RCA makes available to its equipment

users include training, analysis and programing guidance, program testing, consultation on site preparation, equipment service and maintenance, a program library of service routines, and automatic programing. For further information about the RCA 501 system, write to Robert Z. LaTerza, Radio Corp. of America, Bldg. 15-1, Camden, N. J., or Circle No. 211.

POWERMARK

for

- Carbon Interleaved Forms
- Invoices
- Insurance Certificates
- Purchase Orders
- Client Numbers
- Identification Codes
- Check Numbering
- Shop Ticket Coding

plus many more

NEW ELECTRIC NUMBERING, CODING, DATING MACHINE FOR CARBON AND ORIGINAL FORMS

10 DAY FREE TRIAL

- Save up to 50% of coding time over hand models.
- Adjusts automatically to mark 1 to 12 carbon copy interleaved sets.
- Numbers consecutive, duplicate, or repeat . . . 6 to 10 wheel models.
- Consistently even, legible impression, perfect alignment on All copies.

Write for Full Details

PRYOR MARKING PRODUCTS

434 SOUTH WABASH AVENUE • CHICAGO 5, ILLINOIS

For More Information Circle No. 450

File Speedaumat Plates FAST

with THE QUIK-SORTER

The Quik-Sorter saves time wherever Speedaumat plates are filed. One person can easily sort plates to a wide range of categories: alphabetically, numerically, geographically—or any other desired groups. The Quik-Sorter has 64 compartments with removable partitions which can be indexed as required—or some partitions can be removed to use fewer, but larger, compartments.

One operator can use as many as three Quik-Sorters, sorting into as many as 192 different categories. Send for illustrated literature and prices. Sold on 10-day approval. Write to Addressing Machine Co. of Calif., 667 Mission St., San Francisco 5, Calif. YUkon 2-2130.

For More Information Circle No. 451

FREE

112 PAGES OF MONEY-SAVING VALUES!

Get your free copy of this giant 1959 illustrated catalog-manual today! It's loaded with thousands of top-quality office, stationery and accounting items all priced to help you—cut office overhead!

Industrial Division, **ACCOUNTANTS' SUPPLY HOUSE** O5
518 Rockaway Ave., Valley Stream, L. I., N. Y.

NAME .....

FIRM .....

ADDRESS .....CITY .....STATE .....

For More Information Circle No. 452

News of the Office

IASA Annual Conference

The Insurance Accounting & Statistical Assn. will hold its annual conference at the Ambassador Hotel, Atlantic City, May 18-20. The opening address will be delivered by Dr. S. S. Huebner, Emeritus Professor of Insurance at the University of Pennsylvania and dean of insurance education. Some of the topics to be discussed at the workshop sessions include "The Impact of Electronic Data Processing, Operations Research and Systems Analysis on Solving Business Problems," "Forum for Newly Organized Life Companies," "Conversion Problems in Electronic Data Processing Applications" and "A Plan for Budget Premiums." A business show featuring office equipment and service displays is an integral part of the conference. For the complete program, write L. J. Hale, secretary-treasurer, Box 139, Kansas City, Mo.

Two TIMS Meetings

The Institute of Management Sciences will conduct its first national meeting at the Congress Hotel, Chicago, June 4-6. The sixth annual international meeting will be in Paris, Sept. 7-10. Both meetings will present papers by qualified experts in the fields of management planning and control. A TWA Constellation has been chartered to take the American delegation to the Paris meeting at the Conservatoire des Arts et Metiers. On Sept. 11, TIMS will co-sponsor with Econometrica Society a half-day session in Amsterdam, Holland, on areas of mutual interest. Further information from Harold H. Cauvet, Institute of Management Sciences, 250 North St., White Plains, N. Y.

NSBB Conference May 21-22

The ninth annual conference of the National Society for Business Budgeting is being held at the Hotel Leamington, Minneapolis, May 21-22. This year's meeting features two themes: "Budgeting—The Road Map to Profits" on Thursday; "Pinpointing the Profit Dollar" on Friday. Maurice Stans, U.S. Director of the Budget, and Prof. Ralph Nichols, University of Minnesota, are the luncheon speakers. Details from Box 1202, Minneapolis 40, Minn.

Records Management Courses

American University, Washington, D. C., is offering "Records Management" June 1-12 and "Archives Administration" June 15-July 10. Full information regarding these two courses can be obtained from American University, 1901 F St., N.W., Washington 6, D. C.

Convention Delegate Nameplate

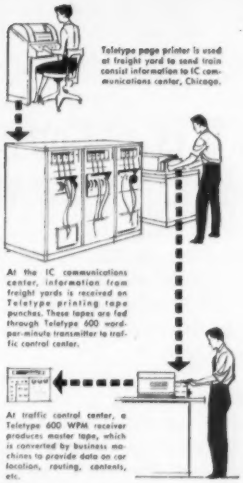
A method of registering and identifying delegates has been devised by National Restaurant Assn. and Addressograph-Multigraph Corp. Each conventioneer, upon registering, will be issued an Addressograph Plastic Identification Card, similar to Addressograph Credit Cards. Some 40,000 plastic cards, each bearing the guest's name, restaurant name and address will be embossed, inserted in a transparent envelope and pinned to the lapel to identify the wearer and serve as a pass to special sessions. A color code will distinguish classifications of delegates. The self-writing unit will be used to imprint addresses on requests for literature to be mailed after the show. Addressograph Im-

New Teletype system cuts car reporting from days to minutes on the Illinois Central

New Teletype equipment—including the first Teletype 600 word-per-minute tape transmission system in the railroad industry—is helping the Illinois Central to expedite the classification of more than 50,000 on-line freight car records daily.

The result is greatly improved customer service. Now, information on freight location or arrival is quickly available to shippers and consignees through the railroad's *service bureau* at Chicago. Railroad management benefits, too, by having up-to-the-minute data—and there are important savings for the account department.

Additional Information. If you'd like to know how Teletype equipment can cut costs and improve service in your particular business—or if you already have Teletype equipment and would like to explore the profitability of using it in new ways—please write for descriptive literature to Teletype Corporation, Dept. 32E, 4100 Fullerton Avenue, Chicago 39, Illinois



TELETYPE®
CORPORATION
SUBSIDIARY OF *Western Electric Company* INC.

For More Information Circle No. 428

"It copies anything . . . in 12 seconds!
. . . and the developing agent
lasts a whole month!"

Here it is . . . Copycat's new deluxe wall model—world's fastest photocopier at any price!

Thanks to an exclusive new Copycat development, you can now have sharp picture-like copies of anything printed, written or drawn, *finished and ready-to-use* in 12 seconds!

The key to this speed and quality is Copycat's patented spray process — a process so startling that the machine can be used every day for a month or more without the need to change its developing agent. And since you never have to "warm it up" or clean its belts, Copycat runs practically unattended, is always ready for use.

Add to this the space-saving wall mount feature — a benefit you can take or leave because you can remove Copycat and carry it from desk to desk, from job to job, without fuss or bother.

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printers will be located in every booth to save time of both delegates and booth attendants, and eliminate misspelled names and addresses. After the show, delegates may keep the identification plates.

Microfilm Enlarger-Printer

At the annual convention of the National Microfilm Assn. last month, Documat, Inc., showed the prototype of their new microfilm reader-printer which automatically makes positive enlargements from 16 and 35 mm negative film, under office lighting, on an 8½" x 11" sheet. Complete process takes 36 seconds. Machine will also make enlargements from continuous tone photo negatives. Production models are expected this fall.

The Pay You Don't Receive

The $5000-a-year man of 1939 must earn $12,113 today to break even in terms of purchasing power, according to the latest chart in the National Industrial Conference Board's "Road Maps of Industry" series. In 1939, a married worker with two children and annual salary of $5000 netted $4941 after paying $59 in social security and federal income taxes. To bring home $4941 today, he must pay federal taxes of $1816 and forfeit $5356 in purchasing power due to inflation. Conversely, the husband and father of two who earns $7035 today can purchase only as much as his counterpart earning $3000 in 1939 when taxes amounted to $30; today they are $846 and inflation takes another $3219. Some other 1939 incomes and amounts which must be earned for equal purchasing power: $1500 in 1939, $3256 today; $10,000 in 1939, $25,674 today; $25,000 in 1939, $76,860 today; $50,000 in 1939, $173,238 today; $100,000 in 1939, $388,547 today.

Railroads Integrate Accounting

Settlement of interline freight accounts between three major railroads was recently effected through a simple exchange of magnetic tapes. F. E. Martin, vice president and controller, Illinois Central Railroad; R. B. Curry, controller, Southern Railway; R. M. Sutton, vice president and general auditor, Union Pacific Railroad, settled their monthly accounts supported only by a small roll of magnetic tape, instead of the stacks of interline abstract sheets used formerly. This was made possible by the compatibility of the railroads' data processing installations.

Faster Searching Machine

Western Reserve University's president John S. Millis, said General Electric Co. would build a high speed prototype of the WRU searching selector called the GE-250. The old WRU selector could search 30 abstracts per hour while the new one will search 100,000 abstracts per hour. It will be able to search the entire 1037 pages of "Gone With The Wind" in 3½ minutes, picking out the number of times which one word or combination of words appears. Since Jan. 1, the documentation center, using its present slow machine is keeping ten business organizations up-to-date on scientific happenings in their fields of research and development activities. With the new machine, WRU will be able to offer this service to all 30,000 members of the American Society for Metals.

OMAC's Next Annual Show

Following the close of its 1959 business show, the Office Management Assn. of Chicago announced that its 1960 show will be held at the Conrad Hilton Hotel, Chicago, Feb. 29 to March 3.

Russians See Our Computers

Eight Russian computer experts and mathematicians came here last month for a two-week tour of U.S. industrial and educational data processing facilities. The visit was arranged by the National Joint Computer Committee as part of a cultural exchange program under auspices of the State Department. A group of American computer scientists will make a reciprocal visit to the Soviet Union beginning May 17.

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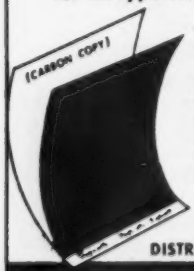

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Put Power in Policy

(Continued from page 96)

If someone asked her to deviate from the policy, she told him that she could not. If they insisted, she told them to see the assistant general manager. Very few did, and those few were told: "We have a fair policy for providing parking stalls for executives and supervisors. If you would like to make a proposal on that part of the policy you think should be altered, give your reasons in writing. Then I can take it up with the general manager and see if he wants to change his policy." That stopped all of them.

Here we have an example of an organization problem solved by a clear statement of the policy, based on something exact (rank in the organization), and administered without exception.

The new policy was powerful. It allowed complete delegation of the administrative side of the policy to one girl, for a few minutes a day. She was able, with the use of a job outline supplementing the policy and the use of one or two forms, to easily administer a controversial activity that affected all the "brass" and all the middle supervisory people, some 200 men.

Into this girl's hands was placed the responsibility for administering a policy that involved visitors, customers, vendors and liaison people whose work took them in and out of the plant. But the policy and the procedure behind it were so simply and completely defined that it was no problem *as long as it was administered to the letter.*

The power of policy, once stated and administered consistently, is tremendous.

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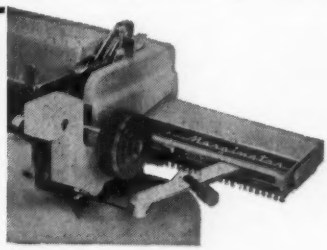

Your "copy" CAN Look Like This

Now - your typewriter is more useful than ever. Anything that is now set up in type can be well reproduced with typewriter composition, and JUSTIFIED so that regular type-set printing is simulated. Regardless of the process of reproduction -- whether for a daily newspaper, an elaborate brochure, or a simple offset, mimeographed, or hektographed bulletin, the Marginator now offers you composition at greater savings than ever before possible. The two columns shown are IDENTICAL line for line. Compare them and see how perfectly the MARGINATOR evens up the right-hand margin.

Your "copy" Now Looks Like This

Now - your typewriter is more useful than ever. Anything that is now set up in type can be well reproduced with typewriter composition, and JUSTIFIED so that regular type-set printing is simulated. Regardless of the process of reproduction -- whether for a daily newspaper, an elaborate brochure, or a simple offset, mimeographed, or hektographed bulletin, the Marginator now offers you composition at greater savings than ever before possible. The two columns shown are IDENTICAL line for line. Compare them and see how perfectly the MARGINATOR evens up the right-hand margin.

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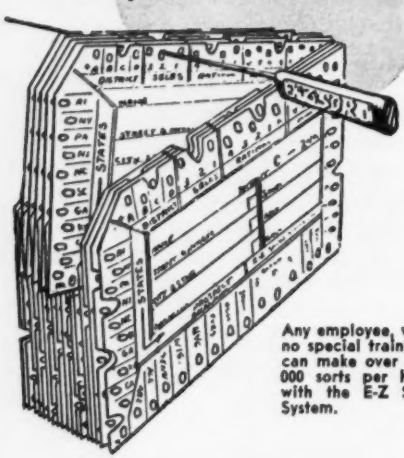

Any employee, with no special training, can make over 60,000 sorts per hour with the E-Z Sort System.

CONTROLS . . . SIMPLIFIES . . . EXPEDITES

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Sole MANUFACTURERS of E-Z SORT Systems.
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Stop Watch Studies

(Continued from page 91)

nating extreme unit times and is considered most typical of the data. On the other hand, its significance may be limited when only a small number of values or unit times are available. Sometimes the median is used because it is easy to calculate and affords a fairly typical answer, free from distortion by unusual unit times. Perhaps the most commonly used method involves judgement—the selected average after the analyst has used his discretion in adjusting for unusual items.

To obtain the most consistent results, many analysts maintain it is necessary to apply some rating, or leveling factor, to the work pace of the employees. If this is not done, the efficiency or inefficiency of the employee on the job at the particular moment when the study is made will set the pattern. Other employees will benefit or suffer inequitably. Each increment should be

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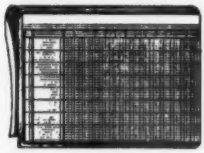

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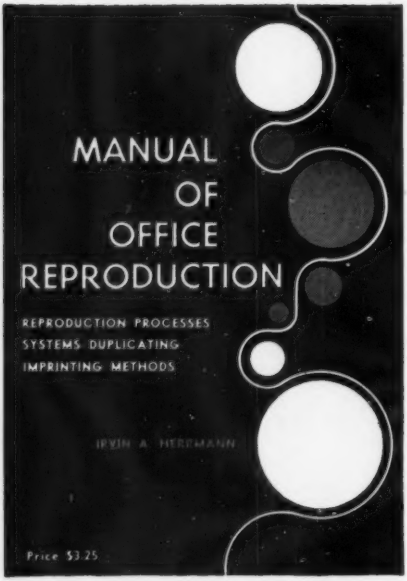

Describes all office reproduction and duplicating processes. Time-saving charts show at a glance which process to use for best results in any situation. Tells how to make the most economical use of whatever duplicating machines an office may now have—how to combine the advantages of one process with those of another to save time and money. Also tells when not to use certain methods.

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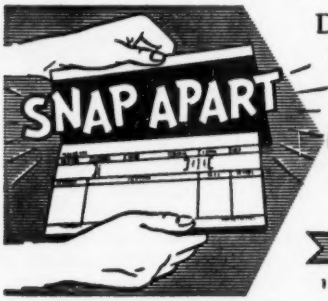
rated, to scale all actual performances to a common norm.

Obviously, this means training all analysts to recognize a concept of what constitutes normal. Moreover, it often means obtaining official approval on the company's work norm—not always an easy task. Therefore, some analysts believe it is less time-consuming and less costly to rely on selected standards based on one of the other statistical techniques.

The computations for a typical stop watch study are shown in Fig. 3. It is assumed that the continuous method is used, and that several studies of a given operation by a group is made, rather than one study of a single selected employee.

In computing the elapsed times, adjustment is made for extraneous elements that lengthened the unit times. The analyst must decide whether these should be included in the standard as a normal part of the job, or excluded as being chance variations. Fig. 4 illustrates how final standards are computed. The average unit times are calculated, including such interruptions the analyst decides are applicable.

It should be observed how the totals for Adams in Fig. 3 were transferred to Fig. 4 for the two steps A and B. Similar studies made of other employees are summarized on this work sheet. The average unit times for each employee are now adjusted by the rating factor—reflecting the degree to which the analyst decides a particular one is performing above or below the rate expected by the company. At this point, the standard is complete.



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News of the Industry

Midwestern Buys Schwab

Leland E. Wood, vice president, Midwestern Mfg. Corp., Indianapolis, announced that his company has bought Schwab Safe Co. in its entirety. Schwab, organized 1872, is one of the oldest manufacturers of safes, vault doors, burglar chests and other insulated products. Midwestern was organized in 1950 to manufacture and sell fireproof and burglarproof equipment not manufactured by Schwab, under the trade name, Ever-Safe. Since then its growth has been steady and its salesmen now cover the entire U. S. and Canada. Midwestern officers are Clarence E. Mann, chairman; Elmer W. Memering, president and director; Leland E. Wood, vice president, treasurer and director. Management and personnel at Schwab will remain and operation will continue without interruption. Both companies showed an increase for the first quarter of 15% over 1958.

Saxer Joins Eastern

George P. Saxer

Appointment of George P. Saxer as advertising manager of the Eastern Fine Paper & Pulp Div. of Standard Packaging Corp., was announced by Charles De Zemler Jr., sales manager. Mr. Saxer had been media supervisor for Hammermill Paper Co. with overall responsibility for the magazine advertising program. He will be located at Eastern's offices in Bangor, Me. Smith, Hagel & Knudsen, Inc., New York, is the advertising agency for the Eastern Div. of Standard Packaging Corp.

Copy-rite Sales Manager

H. S. Hermanson

Howard S. Hermanson was appointed general sales manager of Wolber Duplicator & Supply Co., makers of Copy-rite duplicators. He spent eight years with Addressograph - Multigraph Corp., where he served as senior salesman and manager of the Allentown, Pa., agency, and four years as special U.S. Government representative in Washington. Mr. Hermanson left this post for Ditto, Inc., where he served as director of sales training and contract sales manager. At Wolber, he will be in complete charge of marketing, sales and new product development.

Geiss-America Appoints Moen

Wally Moen, for 18 years a Bell & Howell Co. executive, has been appointed sales director of Geiss-America, Chicago. Mr. Moen developed and administered B & H's national distribution and service organization. Harry J. Graw, Geiss-America's president, also announced a low priced, magazine loading, Minifon tape dictating machine.

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MODERN ELEVATOR STAND

VALUE FAR ABOVE THE PRICE

QUIET UNDERCOATED TO ABSORB NOISE

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SPECIAL

MORE FOR YOUR MONEY

in these features. . .

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- Power pedal
- Rattle proof — *quiet*
- 2 drop leaves
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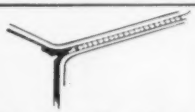
Mist Green Gray Desert Tan Olive Green Brown	 One Foot Adjustable	 Continuous Piano Hinge	 Exclusive Power Pedal

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For More Information Circle No. 234

Bemis Acquires Rose

Bemis Bro. Bag Co. is acquiring Rose Ribbon & Carbon Mfg. Co., Harrison, N. J., one of the leading manufacturers of duplicating carbons. The Rose company will operate as a wholly-owned subsidiary of Bemis with Adolph Rose as president. No change in management personnel or operating policies will result from this affiliation and Rose Ribbon & Carbon Mfg. Co. will continue to serve its customers as in the past.

WOFI Reelects Boling

The Wood Office Furniture Institute has reelected J. K. Boling as president. Mr. Boling is vice president of Boling Chair Co., Siler City, N. C. Other officers are Gilbert B. Bosse, president, Imperial Desk Co., vice president; T. R. Pitts, vice president, Myrtle Desk Co., secretary-treasurer.

Victor Export Manager

Jay W. Cook was appointed export manager of Victor Adding Machine Export Co., a wholly-owned subsidiary of Victor Adding Machine Co., Chicago. Mr. Cook had been export manager of American Photocopy Equipment Co. since 1956 before joining Victor in 1959. He served with Ditto Inc. from 1947 to 1955, attaining the position of assistant export manager. A. F. Bakewell, Victor vice president and general sales manager, announced that Mr. Cook will concentrate on the Central and South American market.

National Business Show Theme

United Press International and various show exhibitors will cooperate in a "Business and Communications" theme center at the National Business Show, Oct. 19-23, in the New York Coliseum. Through a UPI installation, general and business news will be gathered and copy edited, plates prepared and bulletins printed on the floor of the show, using exhibitors' equipment. This will demonstrate to the more than 144,000 executives who annually attend the show, that business and communications has a dual meaning: internal communications dependent on the cost-cutting equipment displayed at the show, and external communications influencing the overall thinking of management executives as provided by newspapers and magazines.

American Evatype Expands

For the second time in ten years, Richard Evans Sr. and Richard Evans Jr. announced expansion of manufacturing facilities at American Evatype Corp., manufacturers of rubber platemaking equipment. In its specially planned new plant at 750 Central Ave., Deerfield, Ill., the corporation has consolidated all operations in 14,000 sq. ft. on one level. New, modern equipment will speed, simplify, and make it possible to expand production of all Eva-Press rubber platemaking equipment which includes four press sizes for rubber stamp and rubber platemaking, plus industrial rubber die-making kits, rubber stamp-making kits, Eva-Gauges and rubber plate

Dealer salesmen of Verifax office copiers discuss sales techniques in one - week classes at Eastman Kodak's new business photo methods training center in Rochester, N.Y. Leading discussion is Hume M. Deming (right), manager of the center. Display on bulletin board illustrates use of Verifax copying in business systems.

ARE YOUR TYPISTS
Happy?

Any complaints from your typists lately? Better check! Typists become very unhappy (and inefficient) when their typewriter stands vibrate, wobble and creep. Hercules® stands are too stiff-necked for that sort of nonsense, thanks to their all-welded tubular steel construction. At your Meilink dealer or write for folder to Meilink Steel Safe Company, Toledo 6, Ohio.

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trimmers. Ample warehousing and shipping facilities can handle a complete line of rubber platemaking supplies.

First Manufacturers' Exhibit

The first national exhibit staged by manufacturers of office machines and equipment to better serve all their customers will be held in the National Guard Armory, Washington, D. C., Sept. 22-25, Fortune P. Ryan, president of Office Equipment Manufacturers Institute, announced. Mr. Ryan, executive vice president of Royal McBee Corp., said: "This inaugural exhibit is the first of its kind in the 80-year history of the industry that serves all industry." Approximately 50 manufacturers will exhibit.

Art Metal Moves to New York

At the annual stockholders meeting last month of Art Metal Construction Co., it was announced that the company's executive offices would be moved from Jamestown, N. Y., to New York City.

Davidson Marketing Manager

Appointment of Paul Dorion as manager of marketing was announced by Davidson Corp., subsidiary of Mergenthaler Linotype Co., Brooklyn, N. Y. Mr. Dorion has been active in sales and merchandising in the electrical appliance industry, and joined Davidson in 1957 as assistant to the sales manager. His immediate responsibility is sales and market development for the Embee Office Folding Machine and Protype photocomposing equipment.

Smith Gets Univac Sales Post

Sales activities for specialized applications of Remington Rand Univac computers in the industrial fields are now under the direction of Gordon Smith, recently named director of industry marketing for Remington Rand Univac Division, Sperry Rand Corp. Mr. Smith, formerly associated with IBM in various executive management capacities, began

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ACCOUNTING
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Accepts ledger sheets up to 17 inches in width. Enables typist to read copy from wide sheets directly in front of her, without eye or neck strain. Flexible adjustment to any desk. Easy to use.

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Copyholder

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Write for descriptive catalog

Hall-Welter
COMPANY, INC. • ROCHESTER 20, N.Y.
38 MT. HOPE AVENUE

For More Information Circle No. 358

his career in the tabulating machines and computer field in 1940. In his new capacity he will have the assistance of A. F. Draper as manager of industrial sales and a staff of specialists well acquainted with industrial data processing problems.

Sampson Joins Diebold

Cooperating with banking and business to control the huge inundation of record keeping, Diebold, Inc., has appointed Rodney T. Sampson as product manager for the company's systems printing operations. Formerly systems manager for Loan-a-matic systems, Hartford, Mr. Sampson worked on the design of specialized record and coding methods for banks, particularly for installment loans and mortgages. Prior to that he was owner of Business Controls Service, Boston, and a controller at major U. S. Army installations.

Royal McBee's Research Head

Charles E. Shinn was named director of research and development for Royal McBee Corp., Philip M. Zenner, president, announced. Mr. Shinn will make his headquarters in Hartford, Conn. He joined Royal McBee in 1957 as manager of the development engineering department, after gaining a wide range of experience in the electrical and electronics industry, including association with Burroughs Corp. and RCA.

Mr. Roy Type, a slightly whimsical personification of an alert, indefatigable and friendly salesman, has been created by Royal McBee Corp. as a symbol to identify its Roytype ribbons, carbon papers and other typewriter supplies, states X. N. Benziger, advertising manager for typewriter products.

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Add filing space by destroying cancelled checks, ledger sheets, time cards, W2's, pay vouchers and obsolete papers—in your own office! The new "SILVER EXECUTIVE AUTOMATIC" Paper Shredder is the only automatic feed machine . . . shreds papers into unreadable ¼" strips, in just a few seconds! The machine is an attractive, typewriter-size, portable desk model, with full ½ HP motor. Completely safe, and easy to operate. Many other sizes available, too.

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All this at half the cost of steel because "CONVOYS" are heavy duty corrugated board processed to remarkable strength.

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For More Information Circle No. 439

Facit Appointments

Charles A. Gover Jr. joined Facit, Inc., national distributor of Swedish-made Facit calculators, Facit typewriters and Odhner adding machines, as assistant to the general sales manager, it was announced by Karl Siewert, president of the firm. Mr. Gover, previously employed by the Remington Rand Div. of Sperry-Rand Corp., as a dealer sales representative, will work under George Haag, vice president and general sales manager, in directing Facit's network of office machine dealers and distributors. Anthony J. Arancio was named assistant to the northeast district sales manager, Lou Merlano. Mr. Arancio has been associated with Facit for the past seven years.

Clarin Asst. Sales Manager

John S. Cassell has been named assistant sales manager of Clarin Mfg. Co., Chicago seating manufacturer for institutions and industries. Mr. Cassell brings to his new position nearly 25 years of experience as a sales executive in various enterprises. His wide experience will be used in promoting sales of Clarin Chairs through all outlets.

Ames Chicago Sales Manager

Arthur H. Ames, manager of the Detroit office of Ames Supply Co., was appointed sales manager of the Chicago office. Mr. Ames joined the firm in 1951 and was recently elected a director of the company. In his new position, he hopes to become better acquainted with the dealers served by the Chicago office. Donald C. Richter replaces Mr. Ames as manager of the Detroit office.

Ink Specialties Co. Moves

Expansion plans necessitated by increased production and research requirements have resulted in a relocation of offices and plant facilities for Ink Specialties Co., Chicago manufacturer of stencil duplicating inks. The new quarters are at 7719 West Van Buren St., Forest Park, Ill.

New $1 million warehouse of the Masell Mfg. Div. of Cole Steel Equipment Co. in York, Pa. Designed by Buchart Associates, it will be able to load seven railroad cars and 22 trucks at one time. Factory will be connected to it by an overhead bridge.

N. Y. Exhibition Center

A permanent exhibition center for office equipment parts, materials and supplies is being established in New York, according to H. Newman Clark, executive director of Product Designer Displaycase. The address will be 1 Park Ave., adjacent to the New York Furniture Exchange. Similar centers are being planned for the south, midwest and Pacific coast.

To Expand Letterex Sales

William S. Humphreys, vice president and sales manager, Letterex Corp., Washington, D. C., and H. J. Siegle, vice president, Associated Stationers Supply Co., Chicago, announced that they have completed arrangements to join in expanding sales of Letterex line through Associated's wholesale division and Horder Stationery Stores, Inc. Horder plans an all-out pro-

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GREEN BACK

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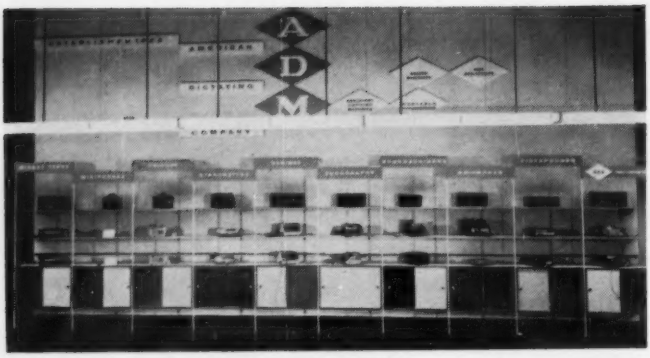
For More Information Circle No. 400



Business Machines Mart, opened by American Dictating Machine Co. at 51 West 45th St., New York, is first of a network to be operated on a franchise basis by independent machine retailers in major markets, according to Jim Marino, ADM president.

gram for Letterex in the Chicago area. The marketing experiences from the program will be passed along to dealers.

Marble to Expand in New York

John E. Mossman, former president of Desks, Inc., New York, and Jack G. Schwander, former Desks, Inc., board chairman. were named vice presidents of B. L. Marble Chair Co., Bedford, Ohio, according to Charles L. Pettibone, president, who said his company would open expanded sales offices in New York and the two newly appointed executives would head the office to promote new lines of office furniture. Sales activity in New York, Long Island, New Jersey, Philadelphia, Baltimore and Washington, D. C., will be supervised out of New York by Messrs. Mossman and Schwander. C. B. Schubert, Marble Chair Company vice

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Special engineering is the key to motor dependability in business machines . . . because it assures the exact mechanical and electrical requirements for the application. This is one of the reasons why more and more designers of leading business machines are turning to Lamb Electric Motors, which are *all* specially engineered.

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Lamb Electric
SPECIAL APPLICATION FRACTIONAL HORSEPOWER MOTORS

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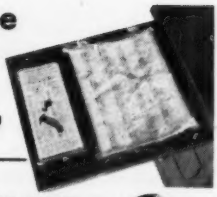
Do You Have "DESK-SHELF MESS?"



clean it up with a

VISO-DESKPLATE

Be rid of dirty, taped and torn sheets on your desk shelf! The new heavy gauge plastic Viso-Deskplate keeps calendars, schedules, phone lists neat and clean.

Crystal clear—smooth to write on—unbreakable. Dirt or ink spots easily wiped off. Self-sealing hinge—just lift front edge to change material. Standard size 12½" x 15"—special sizes on request.

ORDER TODAY—SATISFACTION GUARANTEED

If your stationer does not have Viso-Deskplate, we ship postpaid for check with order (or open account to rated companies).

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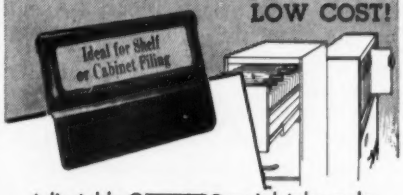
Smith's OPNWINDO® Metal Tabs solve filing problems at LOW COST!



Adjustable OPNWINDO® metal tabs make it easy, economical to expand or revise your present filing system; start a new system; or convert to shelf filing. Available in 1 and 2 inch widths, the tabs are complete with clear or colored plastic label covers.

If not available from your dealer, write to

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A precision made instrument with handsome chrome finish. It is new, novel, smooth, silent, and efficient in operation. Never needs refilling. It will weld up to six sheets of 16# paper. Modernize your office with this time and money saving office appliance. An ideal gift with name engraved on the handle. If your dealer cannot supply you, write direct. Dealer inquiries invited.

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For More Information Circle No. 427

president and director now in charge of the New York office and eastern sales activity, retires July 1.

Badger Now Makes Consolett

Badger, Inc., LaCrosse, Wis., announced purchase of the manufacturing rights to the Consolett machine stand and cabinet formerly made by Stolper Steel Products Corp. James E. Kuppe, Badger sales manager, invites inquiries from all former Stolper dealers for price information and catalogs.

Totalia, Numeria in Midwest

Import Office Machine Co., 159 N. Dearborn St., Chicago 1, has been organized by Grobark & Co. to devote itself exclusively to the distribution in the middle west of Totalia adding machines and Numeria calculating machines. Grobark, as office machines dealers in Chicago, has established the new company with its own separate organization to specialize in the sale of these products.

New Envelope Machinery

Robert B. Shapiro, executive vice president and general manager of Transo Envelope Co., Chicago, reports that they have invested over a million dollars in new envelope manufacturing equipment including a 20-ton $100,000 European machine that prints, folds and gums 24,000 envelopes an hour. Also imported is a machine to produce an envelope which can be sealed without moistening. It prints inside and outside, folds and applies latex in one operation. "With the addition of our new equipment," says Mr. Shapiro, "we can manufacture over 1,644,000,000 envelopes per year. Transo bought the envelope division of Wolf Bros., Philadelphia, and opened a west coast plant last year.

Royal McBee Names Four

W. H. Beckwith, vice president, Appliance Div., Royal McBee Corp., named four men to new posts within his division. John Hill, formerly central region appliance manager, is appliance sales adminis-

trative manager, with headquarters at Port Chester, N. Y. Blair Rodgers, formerly Great Lakes appliance manager, is appliance training manager at Port Chester. The division's Great Lakes and central regions were consolidated into one central region headed by Kenneth Clark, with headquarters in Chicago. Walter D. Kennedy assumed portable representative responsibilities in a major Los Angeles territory.

Tab Card Makers Organize

Establishment of the Assn. of Tabulating Card Manufacturers was announced by Carroll A. Greathouse, president, Frank H. Baxter Associates, Inc., industrial consultants, of 145 East 32nd St., New York 16, from whom full information is available.

NAMA's Darling To Retire

The forthcoming retirement of Clinton S. Darling as executive director of National Automatic Merchandising Assn. when he reaches the mandatory retirement age in 1960, and the appointment of Thomas B. Hungerford of St. Louis as his successor, were announced by William S. Fishman, association president.

"I'm not taking any chances!"

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1. *Safeguarding privacy.*
2. *Quieting the office.*
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Model for all types of phones and dictating machines.
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Indelibly prints
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For Your Annual
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Manufactured and Distributed to Office Machine Dealers by
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Contact your Local Typewriter Dealer

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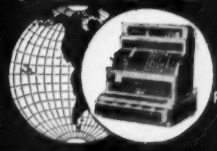
WORLD WIDE SERVICE



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For More Information Circle No. 449

Sales representatives at a national sales conference of Milo Harding Co., Tempo stencil products manufacturer in Monterey Park, Calif., with the nine models of Tempo-Geha Stencil Duplicators. James M. Harding, president, is fourth from right.

Burroughs Bank Department

Burroughs Corp. has completed a major re-organization of marketing forces to meet the growing demands of electronic banking, Ray R. Eppert, president, announced. This affects the sale and service of products produced for banks by their Burroughs, ElectroData and Todd Co. Divisions, from coded checks and documents, electro-mechanical and electronic bank accounting equipment to electronic computers and complete data processing systems for banking. The Burroughs Division will sell and service computers produced by ElectroData. V. James Ford, formerly an ElectroData Division regional manager, is manager of the new financial sales department. The three departments operating under Mr. Ford's direction are: special banking representatives (Lester J. Clawson, manager; A. F. Montgomery, eastern area manager; Harry W. Butts, western area manager); general banking operations (Charles F. Loeher, manager); special financial operations (James V. Vitale, manager).

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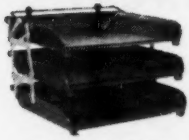

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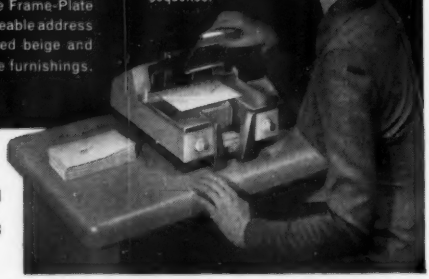
Plates can be skipped or repeated as often as desired, and are always in sequence.



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For More Information Circle No. 476

National Conference & Exhibit Calendar

National Office Furniture Assn., Fontainebleau Hotel, Miami Beach, May 1-4.

National Assn. of Credit Management, Dallas, May 3-7.

National Assn. of Educational Buyers, Fontainebleau Hotel, Miami Beach, May 11-13.

American Institute of Industrial Engineers, Biltmore Hotel, Atlanta, May 14-16.

Insurance Accounting & Statistical Assn., Ambassador Hotel, Atlantic City, May 17-20.

New York Stationery Show, New Yorker Hotel, May 17-22.

National Society for Business Budgeting, Leamington Hotel, Minneapolis, May 21-22.

Institute of Internal Auditors, Shoreham Hotel, Washington, D. C., May 24-27.

National Office Management Assn., Roosevelt Hotel, New Orleans, May 24-27.

National Assn. of Accountants, Waldorf-Astoria Hotel, New York, June 21-24.

National Office Machine Dealers Assn., Netherlands-Hilton Hotel, Cincinnati, June 21-24.

National Machine Accountants Assn., Chase-Park Plaza Hotel, St. Louis, June 24-26.

National Secretaries Assn., Americana Hotel, Miami Beach, July 19-25.

National Society of Public Accountants, Sherman Hotel, Chicago, Aug. 24-28.

Assn. for Computing Machinery, Massachusetts Institute of Technology, Cambridge, Mass., Sept. 1-3.

Educational Graphic Arts Exposition, Coliseum, New York, Sept. 6-12.

National Assn. of Bank Auditors & Controllers, Statler Hotel, Boston, Sept. 21-23.

Office Equipment Manufacturers Institute, National Guard Armory, Washington, D. C., Sept. 22-25.

National Stationery & Office Equipment Assn., Conrad Hilton Hotel, Chicago, Sept. 26-30.

Life Office Management Assn., Edgewater Beach Hotel, Chicago, Sept. 28-30.

National Business Forms Associates, Chalfonte Haddon Hall, Atlantic City, Oct. 4-8.

National Institute of Governmental Purchasing, Sheraton-Cleveland Hotel, Cleveland, Oct. 11-14.

Systems & Procedures Assn., Royal York Hotel, Toronto, Canada, Oct. 12-14.

Eastern Commercial Stationery Show, N. Y. Trade Show Bldg., New York, Oct. 17-20.

Institute of Newspaper Controllers & Finance Officers, Hotel del Coronado, San Diego, Oct. 18-21.

National Business Show, Coliseum, New York, Oct. 19-23,

Insurance Accountants Assn., Bellevue-Stratford Hotel, Philadelphia, Oct. 21-23.

Controllers Institute of America, Penn-Sheraton Hotel, Pittsburgh, Oct. 24-28.

American Institute of Certified Public Accountants, Fairmont & Mark Hopkins Hotels, San Francisco, Oct. 24-29.

American Bankers Assn., Miami Beach, Oct. 25-28.

International Automation Exposition, N. Y. Trade Show Bldg., New York, Nov. 16-20.

EVENTS ABROAD

Hanover Fair, Germany, to May 5.

Business Efficiency Exhibition, London, England, May 25-June 4.

Unesco Information Processing Conference, Paris, France, June 13-23.

ADVERTISERS

Acco Products 72
Accountants Supply House 261
Acme Visible Records, Inc. 194
Addo-x, Inc. 157
Addressing Machine Co. of California 261
Addressograph-Multigraph Corp. 105
Allen Business Machines, Inc., R. C. 248
Allied Carbon & Ribbon Mfg. Corp. 52
All-Rite Pen, Inc. 146
Alvin & Co. 287
American Evatype Corp. 228
American Numbering Machine Co. 209
American Ribbon & Carbon Co. 281
Ames Supply Co. 285
Anken Film Co. 142
Arlington Aluminum Co. 238
Associated Industrial Designers 280
Atlas Stencil Files Corp. 246

Badger, Inc. 244
Baltimore Business Forms Co. 106
Bankers Box Co. 226
Bankers & Merchants, Inc. 278
Basten, Peter 283
Bates Mfg. Co. 73
Beach Publishing Co. 200
Beemak Plastics 247
Bell & Howell Phillipsburg Co. 95
Bentson Mfg. Co. 149
Bergstrom Paper Co. 225
Bevco-Precision Mfg. Co. 212
Bickett Co., L. M. 243
Bohn Duplicator Co. 173
Borroughs Mfg. Co. 67
Bruning Co., Charles 229
Bunn Co., B. H. 197
Business Efficiency Aids 190

C-Thru Ruler Co. 269
Carteret Printing Co. 266
Cashere Corp. 285
Catalog Services Institute 223
Catskill Craftsmen, Inc. 169
Cel-U-Dex Corp. 54
Challenge Machinery Co. 137
Changepoint, Inc. 37
Cheshire, Inc. 210
Chesley Industries, Inc. 209
Cincinnati Time Recorder Co. 34
Clarin Mfg. Co. 191
Clarkson Press, Inc. 188
Clar-O-Type Co. 40
Codo Mfg. Corp. 259
Cole Steel Equipment Co. 139
Cole Steel Office Machines, Inc. 75
Collamatic Corp. 101
Colonial Carbon Co. 76
Columbia Ribbon & Carbon Mfg. Co. 144
Comptometer Corp. 1
Continental Office Machines,, Inc. 38
Continuous Forms, Inc. 283
Control Systems, Inc. (Plus) 44
Control Systems, Inc. (Plus Diehl) 153
Convoy, Inc. 280
Copycat Corp. 264
Copy-Craft, Inc. 257
Cotterman, I. D. 232
Cramer Posture Chair Co. 47

Davidson Corp. 51
DeJur-Amsco Corp. 205
Delta Products Div., Air Accessories, Inc. 192
DeLuxe Metal Furniture Co. 97, 98, 99, 100
Denominator Co. 199
Dewberry Engraving Co. 260
Dick Co. A. B. 6, 7
Didde-Glaser, Inc. 165
Diebold Inc. 231
Direct Image Aluminum Plate & Supply Co. 220
Ditto, Inc. ..... Inner Back Cover
Dry-stik Co. 250
Dupli-Typer Corp. 200

Eastern Fine Paper & Pulp Division 140
Eastman Kodak Co. (Recordak) 163
Eastman Kodak Co. (Verifax) 133
English Numbering Machines, Ltd. 277
Evans Specialty Co. 237
Ever Ready Calendar Mfg. Co. 222
E-Z Sort Systems, Ltd. 268

Faber-Castell Pencil Co., A. W. 220
Facit, Inc. 32
Felins Tying Machine Co. 260
Finch, Pruyn & Co. 123
Fletcher Paper Co. 235
Force & Co., Wm. A. 158
Fordigraph Corp. of America 193
Friden, Inc. 124

Gates Acoustinet Co. 5
General Fireproofing Co. 78
Graff Co., George B. 215
Graphic Systems 223
Griffin Mfg. Co. 232

Hall-Welter Co. 278
Haloid Xerox Inc. 154
Hamilton Paper Co. 159
Heller Roberts Mfg. Corp. 227
Hey Co., D. C. 283
Heyer Corp. 219
Hill, Inc., R. O. H. 150
H-O-N Co. 42
Hush-A-Phone Co. 285
Hutton Business Service 287
Hygienic Dental Mfg. Co. 4

Ideas, Inc. 266
Industrial Shredder & Cutter Co. 279
Inter-Continental Trading Corp. 170
International Business Forms, Inc. 271
International Office Appliances, Inc. 277
International Paper Co. 11
Interstate Metal Products Co. 273

Johnson Plastic Tops, Inc. 255
Jones Box Co., Jesse 286

Kenro Graphics, Inc. 46
Koh-I-Noor Pencil Co. 269

Lagomarsino-FAI 71
Lamb Electric Co. 282
Lassco Products, Inc. 39
Lee Products Co. 166
Letterex Corp. 109
Lithoplate, Inc. 13
Ludwig, Inc., F. G. 167

M&M Industries 246
Mac Panel Co. 2
Maggie Magnetic Visual Aids Corp. 250
Magi-Copy 284
Manpower, Inc. 147
Marchant Calculators Div., Smith-Corona Marchant Inc. 56
Marginator Co. 267
Master Addresser Co. 202
Meilink Steel Safe Co. 276
Metal Products Engineering, Inc. 40
Michael Lith Sales Corp. 252
Micropoint, Inc. 121
Miller-Trojan Co. 243
Mim-E-O Stencil Files Co. 162
Minnesota Mining & Mfg. Co. (Mending Tape) 240
Minnesota Mining & Mfg. Co. (Microfilm Reader) 35
Minnesota Mining & Mfg. Co. (Thermo-Fax) .. 118
Modern Business Forms Mfg. Co. 217
Monroe Calculating Machine Co. (Accounting Machines) 102
Monroe Calculating Machine Co. (Calculators) 239
Moore Business Forms, Inc. 116, 117

Nardon Mfg. Co. 241
National Business Show 233
National Cash Register Co. 208
National Litho Forms Co. 287
National Manifolding Co. 269
Nekoosa-Edwards Paper Co. 21, 22, 23, 24, 25, 26, 27, 28
Nettle Mfg. Co. 218
Nippo Machine Industry Co., Ltd. 285
Nord Mfg. Corp. 185
North American Philips Co. 36
Nu-Arc Co. 66

Office Products, Inc. 254
Office Publications, Inc. 270
Olivetti Corp. of America 112
Outlook Envelope Co. 278
Oxford Filing Supply Co. 242
Ozalid Div., General Aniline & Film Corp. ... 143

Paper Welder, Inc. 284
Paterson Parchment Paper Co. 204
Photostat Corp. 251
Pitney-Bowes, Inc. (Folding & Inserting Machine) 18, 19
Pitney-Bowes, Inc. (Postage Meter) 187
Pitney-Bowes, Inc. (Tickometer) 115
Plain-Vu, Carr Corp. 269
Plastic Binding Corp. 171
Plastic Letter Industries, Inc. 218
Plus Computing Machines Division 44
Plymouth Rubber Co. 258
Port Huron Sulphite & Paper Co. 183
Posting Equipment Corp. 206
Precision Mfg. Co. 212
Print-O-Matic Co. 252
Pronto File Corp. 155
Pryor Marking Products 261

Rapid Roller Co. 68
Raub, Inc., William L. 234
Recordak Corp. 163
Record Files, Inc. 253
Regna Cash Registers, Inc. 53
Rena Buromaschinenfabrik G.m.b.H. & Co. 161
Replica Products Corp. 230
Republic Molding Corp. 198
Reynolds & Reynolds Co. 30, 31
Rite-Line Corp. 287
Roberts Rubber Co., Weldon 195
Rogersnap Business Forms 224
Rol-Dex Division 214
Rose Ribbon & Carbon Mfg. Co. 70
Royal McBee Corp. (Data Processing Div.) ... 148
Royal McBee Corp. (Royal Typewriters) .....Outer Back Cover
Royal McBee Corp. (Roytype) 221

S & M Distributing Co. 266
Saunders Mfg. Co. 271
Schwab Safe Co. 278
Scott-Rice Co. 266
Scribe Distributors Co. 77
Scriptomatic, Inc. 29
Sheaffer Pen Co., W. A. 245
Sheppard Co., C. E. 164
Shredmaster Corp. 168
Smead Mfg. Co. 172
Smith, Inc., Charles C. 283
Smith-Corona Marchant, Inc. ....Inner Front Cover
SoundScriber Corp. 48, 49
Speed-O-Matic Co. 232
Speed-O-Print Corp. 288
Spot Carbon Products 230
Standard Duplicating Machines Corp. 41
Standard Instrument Corp. 196
Staplex Co. 156
Star Forms, Inc. 236
Stein Bros. Mfg. Co. 43
Stationer's Loose Leaf Co. 256
Stempel Mfg. Co. 50
Stenocord of America, Inc. 135
Stevenson & Smith, Inc. 212
Stile-Craft Manufacturers, Inc. 274
Supreme Steel Equipment Corp. 151
Swift Business Machines Corp. 74
Swingline, Inc. 65
Syntron Co. 216
Systematics, Inc. 182
Systemation Div., Ross-Martin Co. 232

Tab Products Co. 211
Teletype Corp. 263
Thomas Collators, Inc. 45
Thomas Collators, Inc. (Portable Collator) ... 207
Tiffany Stand Co. 55
Times Facsimile Corp. 184
Torpedo-Werke A. G. 152
Transeuropa 259
Traveletter Corp. 160

Underwood Corp. 131
United States Envelope Co. 213
Universal Business Machines, Inc. 8

Vari-Typer Corp. 201
Venus Pen & Pencil Corp. 189
Victor Adding Machine Co. 203
Visirecord, Inc. 141

Wassell Organization, Inc. 145
Watkins Industries 186
Watson Mfg. Co. 214
Webster Co., F. S. 110, 111
Wolber Duplicator & Supply Co. 69

Zip-O-Riter Products 266

As We See It...

We will stick our neck out to discuss briefly the growing debate over imported and domestic office equipment. The danger here is that reduction to simple written statements makes an involved subject appear misleadingly simple, although there really should be no debate or controversy at all!

It has been the stand of this publication for 24 years that office executives should consider the location of the manufacturer with complete impartiality. The ideal is where management neither asks nor is interested in the equipment's country of origin (nor state, city, or county for that matter — our domestic parochialism is scandalous and inefficient), as long as it is not from slave labor Iron Curtain areas and its spare parts and service facilities are adequate.

The ideal is seldom realized, of course. But surely American businessmen have grown in sophistication today to where they appreciate the significant implications between successful sales of West European office machines in the United States and the preservation of our American freedom.

It is not suggested that imported equipment be purchased for its own sake. Management should consider it strictly on merit and where it measures up in quality and features. The textbooks are right when they say competition breeds better products. Many American companies have met this competition successfully and are doing better than ever. In this respect, it is to the consumer's benefit to regard these products impartially.

*In an average company—from "Small Business Bulletin No. 5," N. Y. State Dept. of Commerce.

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